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Cover: Dr. Carmalt’s clinic in the Jane Ellen Hope Building. (For more about the Hope Building, see page 20). Dr. William Henry Carmalt (1836–1929) was professor of ophthalmology and otology from 1879 to 1881, and professor of principles and practice of surgery from 1881 to 1907.

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The following article is based on a talk which Dean Berliner gave to the Council of Academic Societies at the annual meeting of the Association of American Medical Colleges in November. The theme of the session was "Basic Science Education as the Foundation for Advanced Medical Practice."

There will be new things in the practice of medicine that future physicians will need to cope with. It is important that they have sufficient background in science to be able to understand these and sufficient critical judgement to be able to make reasonable decisions about what they will read or hear.

So, what should our students be taught in their preclinical science curriculum to prepare them for this future? The specifics of what they are taught are far less important than the generalities. I doubt that any of us know exactly what specific areas are going to be the important ones of the future. Our problem is to give students a background that will make it possible for them to assimilate and utilize new developments in any one of a number of fields of knowledge. What is needed for that is not a mass of details at the edge of present knowledge, but a broad understanding of basic principles upon which to build, along with the development of the habit of and faculty for applying those principles to problems. Students must learn early the importance of independent study and self-education. That is what is going to be required of them for the rest of their professional lives. They must learn to examine what they read critically so that they can reach reasonable decisions about the value of new things that appear in the medical literature.

These are the principles which, at least in theory, guide our present curricula. But, in practice, we are not very successful in following them. In the basic sciences, and in the clinical years as well, there is a tendency to load the students with details. Each member of the faculty acts as if every member of the class was going to spend the rest of his life in the field in which the faculty member is expert. Often the result is that the student is loaded with a confusing mass of information that he has great difficulty not only in retaining, but in assembling into an orderly system upon which he can draw conclusions when faced with a problem that may not fall precisely in a form that has previously been presented. The examinations to which students are subjected too often depend on the recall of specific facts rather than requiring the application of more basic principles to the solution of new problems.

Our curricula generally do not prepare students adequately to evaluate the validity of new developments. It is often the case that, in medical school, the student for the first time encounters material whose interpretation is controversial and uncertain. In general, what students have previously been exposed to in their earlier experience will have been fairly well established. In medicine, they must learn to live with uncertainty not only in the sense of probabilities, but in the form of unsettled controversy as well. At the same time, it is important that they learn to question the certainty of others and to doubt, possibly for the first time, the written word.

An important element in preparation for critical evaluation of new information is, of course, an adequate grounding in statistics. This does not mean simply to understand tests of statistical significance, how to calculate a standard deviation or a standard error. Probably more important is the ability to seek out and find possible flaws in the design of studies, which in modern days is such more often the source of faulty conclusions than simply inadequate statistical analysis. The literature these days is full of tests of statistical significance and p-values so that it is unusual that differences that could be attributable to chance alone are interpreted as meaningful. However, it is not uncommon that these tests have been misapplied, and even more frequently there are problems in the study design that make the differences found questionable of interpretation. It is the latter problem that lies behind many of the most controversial issues in present day medical practice.

There is nothing that can make an individual more aware of the problems of experimental design and the interpretation of data than personal involvement in carrying out a significant research project. It is difficult to make such experience a regular part of the undergraduate medical curriculum. It is demanding upon resources and, if adequately supervised, on faculty time and attention. Even more of a problem, however, is the perception that students do not have time in their already crowded schedule to take on additional activities. At Yale, a school that has for some 50 years required of each medical student a thesis...
based on original research, we are continually faced with complaints from our students that they do not have enough time. Often, I’m afraid the complaint is justified, although those students who make adequate plans early enough do not have serious problems. But all of them must deal with the wasteful clinical years of medical school.

The wastefulness of these years is fostered by a number of factors — historical, parochial, and psychological. Historically, medical schools turned out graduates fully prepared to engage in the practice of medicine. As the need for additional training and experience became recognized, the post-graduate years have been added, and it is now generally held that the medical school years are to be looked upon as preparation for several years of supervised experience in a residency. Little adjustment has been made in the clinical years to take this change into account.

One of the reasons that change has been resisted is that each department jealously protects its share of the available time: in part, in an attempt to attract students to a future in its own discipline; in part, out of enthusiasm for its own activities; and in part, simply to make sure that its own importance does not appear diminished relative to that of another. If what is needed, however, is a broad foundation, an understanding of fundamentals, and the ability to draw upon this foundation for the solution of problems, equal time is not the appropriate division. Some areas have broader application than others. I may be accused of parochialism given my own background in internal medicine, if I say that internal medicine — and here I mean internal medicine generally and not the great detail of its individual sub-specialties — provides a greater opportunity for solidifying the student’s grasp of how to apply the principles of science to the solution of individual problems of health and disease than most of the other clinical disciplines. Undergraduate medical education is not the place to make the student into a surgeon, an obstetrician, or a psychiatrist. Hours spent holding retractors in the operating room may add glamour to the medical school years, but they do not contribute much to the ability of students to deal constructively with new problems — unless he or she is going to be a surgeon, which only a fraction of the students will be.

But departmental parochialism is not alone in its responsibility for this type of misspent time. The students themselves, and the house staff, fall easily into the pattern. Students are all too ready to do those things that make them feel like they are behaving as doctors, and nothing gives them that feeling more than being involved in carrying out procedures. The introduction of hands-on clinical experience even into the first year of medical school, — either at the insistence of the students or to stimulate their interest, — is a reflection of the urge of students for identification with the routines of medical care. Unless they are guided with a strong hand away from these activities, they will follow this urge only too readily. But the strong hand is seldom there, or rather, it is there and pushing the students in the wrong direction. The faculty, happy to see the students...
in their own image, and the house staff, happy to share
what they now recognize as drudgery, are quite ready to
allow the students to take on as much of the routine as they
are capable of and willing to do. The students become
heavily involved in doing those things that would be better
reserved until their own house staff years, and things that
they will be doing the rest of their professional lives, rather
than those for which the medical school years are a unique
time — to study in depth, to think problems, even to make
mistakes while there are presumably wiser heads around to
correct them.

Fortunately we don’t hear as much about relevance as
we did five years ago. At that time, the question was
directed at the basic sciences. Were they really relevant to
clinical medicine? Does the subsidence of that wave of
questioning represent a recognition among our students of
the true relevance of the sciences basic to medicine? I’m
inclined to think the answer is more “no” than “yes”.
Rather, I believe it reflects the behavior of a less rebellious
cohort of students more willing, if necessary, to put up
with the ideas of their elders even if unconvinced of their
validity. I think it is time for us to raise the question of
relevance. Perhaps we are better qualified to identify what
is really relevant and what is not, having been exposed to
the full range of school, post-doctoral education, “and
more”, as they say in the advertisements. The “more” in
this case is what has happened in medicine in the last few
decades and what is likely to happen in the next few.

What is really irrelevant to the future is much of the
detail of what now goes on in clinical medicine. Many of
the diagnostic procedures now in use, the specific pharma-
cological agents that are prescribed, the surgical opera-
tions that are performed, will be supplanted by others —
better ones, we may hope. Many of the things that now
seem to our students to be most relevant, in which they
most eagerly involve themselves, will not be out of date,
discarded. What will remain the same is the patient and his
or her problems and the physiology and biochemistry and
the psychology that underlie them. What will remain
relevant is the science that provides the basis for under-
standing those problems, for appreciating the reaction of
the patient to his situation, and the rationale of the means
for dealing with them. The important part of the teaching
in the clinical phase of medical school is to emphasize the
application of those sciences to clinical problems and to
habituat the students to thinking about them in an orderly
and logical fashion. That process will never be irrelevant.

Well, here I am in a session supposedly concerned with
the teaching of basic science, and if I’ve said anything, it
has been largely in criticism of the teaching in the clinical
years. I would not want to leave you with the impression
that I don’t think there is anything to criticize in the
preclinical curriculum. It is often too crowded, too much
directed at the acquisition of detailed factual information,
and insufficiently concerned with the assembly of those
facts into a coherent system so that they can be used for
thinking out new problems.

The most important message to the basic sciences is that
they need not, indeed should not concern themselves with
emphasizing what is relevant to today’s clinical practice,
because tomorrow’s will be different. They also should
recognize how wasteful of the student’s time much of the
clinical curriculum is, and should not hesitate to suggest
that some of it might be better used by them. Why should
new courses — genetics, immunology and the like, be
jammed into the limited time devoted to the basic
sciences? Only if it can be shown that the time occupied by
clinical exercises is better spent than what would be dis-
placed from, or further crowded in, the preclinical
curriculum.

You may rightly ask whether the Yale curriculum
reflects what I have been saying. Well, my father used to
tell me, “Do as I say, not as I do.”
To some people, rich sweet desserts are the epitome of gustatory delight. Others prefer a tart apple or sour cherry pie. Ardent coffee drinkers relish cups of strong, bitter black brew. Those less enthusiastic, dilute theirs half and half with milk and add plenty of sugar. Millions of calorie counters drink diet soda and notice little difference between it and the non-diet drinks, yet others find the after-taste of diet drinks bitter and extremely unpleasant.

Why? Research scientists in the field of taste sensation have found that although learning and culture are factors, food preference is also affected by complex chemical and genetic influences. Their findings have implications for discovering underlying causes of taste and smell disorders and for the future of the food industry.

‘‘Taste’’ is generally thought of in hedonic terms — the pleasure or displeasure of flavor, aroma, texture, color, and whatever else that gives a particular food or drink its unique quality. In fact, taste is the sweet, sour, bitter or salty quality of a dissolved substance as it is perceived by cell receptors concentrated on the edges and at the back of the upper surface of the tongue. Flavor — chocolate, vanilla, lemon, beef, chicken, and so forth — has three components: taste, smell and texture-temperature. When a food enters the mouth, these three sensory modalities are all independently stimulated to produce a distinct flavor.

More than two million American adults suffer from loss or impairment of gustatory or olfactory senses, according to a recent report of the National Advisory Neurological and Communicative Disorders and Stroke Council. The condition itself is not life threatening, and in comparison to loss or impairment of vision or hearing, it is not generally considered to be a serious loss. Scientists are beginning to realize, however, that the chemical senses have considerable medical significance.

Taste and smell disorders not only prevent people from enjoying eating and drinking — a deprivation of a certain quality of life — they may also have potentially dangerous consequences. For example, anosmic patients (those with an olfactory disorder) are unable to detect escaping gas and other dangerous fumes as well as fires; smell and taste often provide the only means of detecting rotten or rancid foods. Chemosensory defects can signal serious conditions such as cerebral tumors, temporal lobe epilepsy or endocrine disorders. They can also be related to industrial pollutants, viral infection, congenital anomalies, nutritional deficiencies and diabetes.

Although many patients consider taste or smell disorders disabling and serious enough to seek help, the medical profession, for the most part, has viewed the conditions as a mere inconvenience, frequently going as far as to describe them as ‘‘neurotic’’. Furthermore, since there is little known effective treatment for these problems, physicians who do take these complaints seriously often dismiss their patients to ‘‘live with’’ the problem. As a result, many consult psychiatrists, and a few even consider suicide, according to Dr. Linda Bartoshuk, associate professor of epidemiology and psychology at Yale, and an associate fellow of the John B. Pierce Foundation Laboratory.

Dr. Bartoshuk is also associate director and co-principal investigator with Dr. Frank Catalanotto, of the Connecticut Chemosensory Clinical Research Center, a collaborative endeavor of the University of Connecticut, Yale School of Medicine, the Worcester Foundation for Experimental Biology and the Pierce Foundation Laboratory. The Center, one of only four in the country specifically directed toward understanding taste and smell disorders, is funded by a three-year grant from the National Institute on Neurological and Communicative Disorders and Stroke, to study, diagnose and treat disorders of taste and smell. In addition to clinical studies of chemosensory impairment related to illnesses such as multiple sclerosis, kidney failure, neurological disorders, diabetes, and problems related to radiation therapy for cancer, the Center will be involved in basic scientific research on the physiological and psychological basis of taste and smell.

Dr. Bartoshuk’s research is aimed at describing taste sensation. Why do substances taste sweet, sour, salty or bitter? Why do some people have stronger sense than others of a particular taste sensation? The answers to such questions are fundamental to an understanding of chemosensory disorders.

One of the difficulties in determining taste perception is that there may be significant differences even among ‘‘normal’’ populations in taste ability. Recent research in Dr. Bartoshuk’s laboratory and others have revealed a
genetic basis for some of these differences.

Taste researchers have noted that there is more variation among individuals for sweet and bitter than for salty and sour. Salty and sour substances produce relatively little individual variation in taste because the chemical stimulus for both—a tiny positively charged ion—is relatively simple in structure. In contrast, sweet and bitter substances are usually large and complex organic molecules that have varying effects.

Not all bitter substances act on the same receptor mechanisms on the surface of the tongue, but rather, we taste “multiple” bitters, according to Dr. Bartoshuk. One bitter substance, phenylthiocarbamide (PTC), is a hallmark of sorts of genetic determination of taste. Family studies indicate that the inability to taste PTC in foods is a simple Mendelian recessive trait; individuals who carry two recessive genes are relatively insensitive to PTC and are called “nontasters”; while those who carry one or two dominant genes are much more sensitive and are called “tasters”.

About seventy percent of Americans are tasters, and tend to experience a bitter taste from saccharin in diet sodas and potassium chloride, the most common substitute for salt. Thus, reactions to PTC provide a test for gauging reactions to salt and sugar substitutes. This finding is important for research leading to new and better substitutes than are currently available for sugar and salt.

Early studies on the structure of PTC seemed to suggest that a certain very specific part of the PTC molecule was responsible for the variation in bitterness. The only other molecules containing the same structure were not often encountered, so the effect was of more interest then to geneticists than it was to taste investigators.

However, in 1975, Dr. Bartoshuk and her colleagues discovered that caffeine, a bitter substance which does not have the required structure, tastes more bitter to tasters than to nontasters. “Interestingly enough, the concentration of caffeine in an average cup of freshly brewed coffee is below or near threshold for most nontasters, but it is above threshold for most tasters,” she observed. “As our studies continued, we found that the perception of the bitterness of the saccharin was also related to PTC status. At the concentration of saccharin used in most diet sodas, the average taster of PTC perceives two to three times as much bitterness as the average nontaster.”

Dr. Bartoshuk and one of her students, Batheva Rifkin, have extended this research to potassium chloride and to sodium benzoate, a preservative often used in canned foods. They now assume that further study will turn up many more bitter compounds related to PTC. In addition, although it has not yet been statistically confirmed, the research indicates that PTC tasters may be particularly sensitive to certain types of chemotherapy. This may account for taste problems in leukemia patients.
undergoing therapy, for example.

Early in the 1970's a group of medical science writers and public relations people attending a meeting to learn more about taste research from Dr. Bartoshuk, were somewhat astonished when she passed a perfectly cooked artichoke and a glass of water to each of them. After they had eaten the artichoke and drunk the water as instructed, she asked, 'How many of you found that the water tasted quite sweet?'' Several, mostly women, had. The 'artichoke effect', she explained, is another example of the genetic implications of taste. It may also be sex-linked, hence the reason more women than men at the meeting experienced it.

She and her colleagues happened on the taste differences in artichokes while working on a series of projects on taste modifiers — substances, including detergents, the Indian herb Gymnema sylvestre, the African berry known as 'miracle fruit', and one's own saliva, — which, when applied to the tongue will change the basic taste of another substance. For example, if you brush your teeth before eating breakfast, you will notice that orange juice tastes unpleasant. Some toothpaste, and some mouthwash, contain sodium laurel sulfate, a detergent which produces temporary effects on the sense of taste.

'Through understanding these effects is the foundation for the rest of the work in taste research. We don't know, for instance, if two groups that are behaving differently towards a food, are in fact, having the same sensory experience.', Dr. Bartoshuk pointed out.

Laboratory studies have demonstrated that individuals may be sensitive or insensitive to each of the four basic tastes. Dr. Bartoshuk's studies further suggest that sweet and bitter substances can themselves be subdivided so that a given individual may, for instance, be insensitive to a particular bitter stimulus, and very sensitive to other kinds of bitter stimuli. The same may prove true for sweet substances. This permits a great deal of potential variability in taste both among individuals and across species.

Artichokes, caffeine, miracle fruit, saccharin and the like may seem rather frivolous research material to hard-line bench scientists, but they contribute to a thorough understanding of the environmental and hereditary factors necessary to distinguish normal reactions to taste perception from those produced by illness. The Connecticut Chemosensory Clinic is staffed by taste and smell experts as well as physicians from the medical specialties associated with sensory function. One purpose of the clinic is to provide expert diagnosis of abnormal taste and/or smell function by comparing patients' taste/smell abilities with normal function established by laboratory research such as Dr. Bartoshuk's. 'It is our hope that we will not only be able eventually to help these patients but that we will also learn valuable lessons about taste and nutrition from patients with disordered taste function,' she explained.

M. B. Noyes
"This brings back keen memories of a childhood fascination with all the sciences," Dr. David Musto commented when he learned he had been invited to membership on the Council of the Smithsonian Institution. He is the first physician ever to serve on the council of prominent scholars and scientists who advise the Secretary of the Institution about its programs.

For David Musto, the invitation to serve the nation's historical and cultural center was not only an honor and a delight, it was also an affirmation of his scholarship on the history of the development of the sciences and social policy in the United States. His research is recognized as an important contribution to the understanding of legislative decisions in these areas. It has also resulted in several significant appointments including Historian to the President’s Commission on Mental Health, and Historical Advisor to the Chairman of the United Nations Commission on Narcotic Drugs, as well as to membership on the White House Strategy Council on Drug Abuse Policy during President Carter’s administration. He also served as a member of the National Academy of Sciences’ Panel on Abuse and Alcoholism, whose final report was released last fall.

Dr. Musto is professor of psychiatry (Child Study Center) and history of medicine, as well as head of the Section of History and Social Policy of the Bush Center in Child Development and Social Policy. A glance at his curriculum vitae confirms that this combination of science and the humanities has been consistent throughout his academic and professional careers.

After graduation from the University of Washington, where he majored in classical languages, he entered medical school there. When he had completed two years of medical school, he came to Yale for a master’s degree in the history of science and medicine. He returned to the University of Washington to complete his medical education and received his M.D. degree in 1963.

Following internship at The Pennsylvania Hospital in Philadelphia, and a psychiatric residency at Yale-New Haven Hospital Medical Center, he served as special assistant to the Director of the National Institute of Mental Health from 1967 to 1969, and at the same time, as visiting assistant professor of history at Johns Hopkins University. He joined the Yale faculty in 1969 as assistant professor of psychiatry (Child Study Center) and of history.

In addition to his book, The American Disease: Origins of Narcotic Control, which received high praise, Dr. Musto’s extensive bibliography covers such diverse subjects as the biochemical genetics of glucose-6-phosphate dehydrogenase deficiency; the theory of hereditary disease of Luis Mercado (1525–1611); the support of basic sciences in 19th century America; and an historical perspective on the freedom of inquiry and subjects’ rights. It also includes insights into the lives of notables such as John Quincy Adams, Sigmund Freud and Sherlock Holmes. His article in 1968 in the Journal of the American Medical Association on Holmes’s and Freud’s involvement with cocaine provided a basis for the novel and film “The Seven Percent Solution”.

It was as special assistant to the Director of the NIMH that Dr. Musto first became interested in the history of public policy making. “One day, the director, Dr. Stanley Yolles, called me into his office and asked if I would help him with a ‘historical problem’. Apparently, every time public health officials suggested providing heroin maintenance programs for addicts, the opposition, which in this case was the Federal Bureau of Narcotics, would point to a decision by the American Medical Association in 1920, completely opposing heroin maintenance. Dr. Yolles wanted me to find out why, so the next time the subject came up at a Congressional hearing he would have a better response,” he explained.

In both the National Archives and the Library of Congress he found masses of materials on the history of drug abuse policy dating back to before World War I, which essentially had never been consulted. “I became intrigued with the history of narcotics policy in the United States because it was so different from what I had absorbed in medical school and during residency. It was more complicated, and in many ways, more interesting.”

In researching the assignment from Dr. Yolles, he became aware that social problem solvers in Washington and elsewhere in the country, could refer to the history and evolution of the problems they deal with more often than they do. “There are many simple facts about the history of some of our policies, such as that regarding drug abuse, which if better understood, would provide a different perspective on how to approach the problem, and on what kind of goals might be set with the likelihood of some success,” he said. “The same might be said about the profession of psychiatry, which has been particularly susceptible to the social mores of its times, and is liable to expressing in rather more complicated medical language what might otherwise be called simple biases of the moment. One of the dangers of being in the psychiatric profession is that one might think that it is invulnerable — that you can securely take a stance that is extremely objective and separate from the social context in which you live,” he explained. “However, any profession that has to have one foot in the real world, and one foot in research, is very vulnerable to strong pressures from society. It is
important to look at history in order to be humble, to realize that distortions can happen."

To illustrate his point, Dr. Musto cited a few examples. In the 19th century, "documented" claims by pro-slavery polemics of the inherent inferiority of blacks and the dangers to them of emancipation were matched in the north by psychiatrists' studies of Irish immigrants who were claimed to suffer from an ethnic "constitutional inferiority." These examples merely confirm the contemporary social attitude of that time in history when the vast numbers of immigrants to this country seemed to threaten its moral, social and economic structure.

A more recent and professionally disturbing example occurred during the McCarthy era of the 1950's. It involved a serious encroachment on the very basis of professional ethics — preserving patient confidentiality.

In an attempt to learn what attracts people to communism, an academic project called "Appeals of Communism Project", based at Princeton with operations all over the world, turned to psychotherapists for the answer. Therapists were selected by reputation, position, or published papers in social science research. Although half of them declined to reveal information about their left-wing, communist, or ex-communist patients, 35 cases were provided by those therapists who agreed to participate. The purpose of the study was to determine the family constellation that bred communists and the defensive role of communism in their lives, according to Dr. Musto. Each patient's history was studied intensively and in great detail.

"It is doubtful that the patients had consented to the use of their histories or were even aware of this sharing of information, although the published checklist of information requested from their therapists includes categories that would easily identify the patients to anyone knowledgeable about their party careers or public accomplishments," Dr. Musto observed. "This is a good example of how history can be important to the profession, and how any of us, under stress, can be led to do things we might later deeply regret.

"The nation appeared to be in great danger from Communism at that time, and this may have justified to the therapists an apparent grave breach of patient confidentiality, that at a later time might seem strange. Still, good history doesn't encourage one to laugh at the mistakes of the past, but rather to appreciate the humanity and frailty we all share, past and present," he cautioned. If we take this incident merely as another example of how we have progressed, we conveniently ignore the humiliating continuity we have with the past."

Dr. Musto's work in the history of drug policy also reveals a national susceptibility to social pressures of the time. "It seems to me that drug policy is like a cork floating on an ocean. The forces that move it up and down are social perceptions of deviant groups; our attitudes toward foreign nations, and what they may be doing to us; and our faith in international law and diplomacy," he pointed out. "There are so many factors involved other than the actual effect of drugs that it's hard to imagine a field more plagued by being affected by attitudes about many, many other topics and subjects."

Although drug use in the United States today is a matter of considerable concern, it has been a part of the American scene from the earliest settlers who drank heavily, not just for inebriation, but also, they believed, for personal health. Crude opium was imported then, mainly for medical purposes; later in the 19th century, both morphine and codeine were isolated from it — again, mostly for medical use.

It was not until the last third of the 19th century that narcotics use began to be widespread. A year after it developed Aspirin, the Bayer Company successfully manufactured heroin from morphine and introduced it commercially as a cough suppressant, sold over the counter. At about the same time, advances in technology made pure cocaine more readily available, and soon its stimulating and euphoric qualities were highly recommended for athletes, workers and students. Bottlers of popular soda drinks and over-the-counter "tonics" added cocaine to their products. By the turn of the century, both heroin and cocaine were as available as wine and liquor.

"We had a totally free economy in drugs in the United States up until around World War I. There was no restriction other than an average tariff on the importation of crude opium and coca leaves, and their products could be purchased at grocery stores, through mail order catalogs and elsewhere. The result of a free market in drugs was that people used more and more of them," Dr. Musto said. "I find that of interest today, when some advocate the elimination of drug laws and predict that then drug use would decline because the public would not feel compelled to use a forbidden product."

With the widespread use of drugs came a fear of the consequences. Drugs were frequently associated with specific groups which were seen as a locus of difficulty. For instance, before World War I, hostility of southern blacks to whites was linked in the public mind and in the minds of legislators as well, with cocaine. "In fact, it was thought that cocaine was an especially dangerous drug for southern blacks, because, unlike alcohol which damaged your aim if you were shooting someone, cocaine was thought to enhance your aim," Dr. Musto said. "The truth is, Americans were using cocaine in the north and south — both whites and blacks, but given the social climate of the times, the focus was on southern blacks. As the drug era of the 60's and 70's progressed, I became amused at modern studies that indicated that cocaine was a 'naturally' white drug, and that heroin was a 'naturally' black drug. Before World War I, the opposite connections were asserted, 'naturally'. We have clichés in the history of drug policy which are simply unexamined, but have a powerful affect on what we decide to do, what we are after, and who we are after, in the process."

Before World War I, as now, some segments of the
population believed that drugs were the cause of violence and social disintegration in society. "Drugs like heroin and cocaine are not good for society, and I am not in favor of their use. However, the cause and effect of those drugs at times did get a little mixed up. Perceptions of the way drugs seem to affect people can be influenced by social climate, the context in which the drugs are taken, and what consumers expect those drugs to do after they have taken them."

Coincidental to the increasingly widespread use of drugs at the turn of the century was the rise of the Progressive era, closely associated with Theodore Roosevelt. According to Dr. Musto, in many ways the reform movements that characterized the Progressive era have much in common with activities in this country during the 1960's and 1970's.

"Many federal activities which seem modern — the battle against water and air pollution, legislation for pure foods and drugs, mine safety, meat inspection, etc., came from the Progressive period, in which even the word ecology became a byword of conservationists and health reformers alike," he explained.

By the close of the Progressive period, the effort to improve public health had gone a long way toward control of dangerous substances, including the prohibition of alcohol. Eventually, not only "prohibition" but even the term "temperance" acquired a bad name, suggesting over-righteousness and excessive governmental interference in private life. The final rejection of Prohibition and the image it achieved have spread beyond the details of the 18th Amendment to include wariness at almost any statement or proposal to fight alcohol's damage to society. "Neo-prohibitionist" has become a convenient label to discourage open debate about alcohol's role in contemporary America.

"The taint the anti-alcohol movement received from Prohibition led to a disassociation between what we might call broadly the ecology movement — campaigns against carcinogens, atomic wastes, air pollution — and that concerning alcohol. From a progressive, informed and responsible public stance, attracting in 1900 the kind of concerned people now in the ecology movement, those alarmed over the abuse of alcohol have slipped from leadership to the, so to say, arrière-garde."

"Yet, the two campaigns for reform are not that far apart in fundamental concern about public health and safety, a reliance on scientific research, and a desire to improve the common environment. The perception of what we might call the temperance movement may change, just as there has occurred a revolution in our attitude toward cigarette smoking as a social activity and health hazard. If this does occur, there will be a powerful re-association between old allies with undoubtedly strong effects on our social mores and policies," he reasoned.

"Not that prohibition would be reinstated, but consider how significant a change would have taken place if we — and those around us — began viewing a drink the way we have come to view cigarettes."

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

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

"The countryside was beautiful; the October coloring has never been matched. She was surrounded by friends and family and all the conveniences we could assemble," Professor Sewall remembers. "It occurred to me, though, that this is all too seldom true of such cases, and I wondered about those people who have to go through such an experience in the lonely hospital room in a big, crowded city hospital."

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

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

"A Sense of the Ending" was conceived from the response of the students to this interview, according to William Guth. "The videotape of Mrs. Barnard’s reactions to her situation focused on the issues in a way that the written word cannot, or does not do. We were impressed with the students’ responses to it, which ranged from almost complete withdrawal or denial of her situation, to feelings of great compassion for her. In the discussion which followed that and subsequent presentations to other groups of students and health professionals, we became..."
aware of the need for more of this kind of material."

Parts of the interview are incorporated into the 40-minute program produced by Guth. In various settings including a ward at the V.A. Medical Center, the cardiac unit at Yale-New Haven Hospital and the Sewall homesite, Dr. Spiro seeks reactions to it from Patricia Neil, a nurse who had cared for Mrs. Barnard; Dr. Harvey Berger, Class of '77 and assistant professor of diagnostic radiology; and Professor Sewall.

In the interview, Dr. Spiro asks Mrs. Barnard what she sees the future as bringing her. "Well, obviously nothing but death, but the big questions are when and how gracefully, and how much can I be prepared and can my loved ones and friends be prepared?" she responds. "I think if more people were frank we'd get a lot farther in the treatment of fatal illness — just in the comforting side of it to the patient, day by day. This experience has taught me that the touch of a hand, holding hands, can be the most comforting thing in the world," she continues.

"Doctors and others in the hospital may not be as aware of that as they should be," Dr. Spiro notes.

"A pat on the way by, holding a finger for just ten seconds, gives the patient something he can carry with him when he's thinking about the fact that he will never again eat a peanut butter sandwich," she tells Dr. Spiro.

To at least one viewer, this is the lesson of Guth's program. It is not whether one spends one's last days at home surrounded by family and friends or hooked up to a life-support system in a large city hospital — often, there is no choice. The feeling of love and caring expressed to the patient not only by family and friends, but also by doctors and nurses determines the difference between experiencing death as a part of living or experiencing death as a lonely ending to life.

Perhaps the answer lies in an observation nurse Patricia Neil makes. "We must remember that a dying individual is a living individual." Often, this is extremely difficult.

"When you come into a patient's room, as I did into my wife's, with a lump in your throat as big as an orange, it's a little hard to be constructive. It's just too hard to keep the tears back," Professor Sewall remembers. "If I could do it over again, I certainly would see to it that I made a good deal more explicit than I did, my love for her, my feelings for her."

"Mrs. Barnard's experiences are a lesson for all of us," according to Dr. Berger, a young physician specializing in the high-tech of nuclear medicine. As he talks he is adjusting a huge machine which looms over an elderly patient, who looks very small in comparison — and quite apprehensive. "The coronary care unit is a particularly scary environment. The burden falls on us as physicians, as investigators, clinicians, to be the person behind the machine. It's very important that patients realize and are confident that there is a physician, that there is a person behind all the new technology... We've got to reach out, touch them, become part of their lives."

As a health professional, Patricia Neil clearly has wrestled with the question of involvement — of becoming
One of Yale's most distinguished graduates offers a challenge

Dr. Leona Baumgartner ('32 Ph.D., '34 M.D.) is recognized worldwide as an authority on public health. Among numerous achievements and honors, she has been New York City's Commissioner of Health, an Assistant Secretary of State and a Professor at Harvard Medical School.

Already a major benefactor of the School of Medicine, Dr. Baumgartner is especially concerned about the rising cost of becoming a Yale doctor — now $17,000 a year for tuition and living costs. Therefore, in addition to her generous previous gifts, she has just offered to give $75,000 in new money to the Student Revolving Loan Fund, provided that a further $150,000 in new money is given by other medical and public health alumni.

Every dollar that you give to this year's Alumni Fund above what you gave last year will be matched one-for-two by Dr. Baumgartner. If you made no gift last year, she will match your entire gift one-for-two.

Currently at least three out of four Yale medical and public health students need significant amounts of financial aid. Although ninety-five percent of all loans are repaid on schedule, there are still not enough funds to meet students' needs. If Leona Baumgartner's challenge is fully met, funds for student loans will be significantly increased.

Dr. Baumgartner is ready to do her share. How about you?
A MESSAGE FROM THE DEAN OF STUDENTS

Howard Levitin, M.D.

Recent publicity has focused much attention on the problem of financing higher education. As you are undoubtedly aware, rising costs and decreasing money for financial aid create serious problems for medical students and for those considering a career in medicine. In spite of the large amount of money involved, our students have been willing to assume responsibility for their education, anticipate a large debt, and fully expect to pay back the money borrowed. This is attested to by the excellent performance of Yale students in repaying loans.

In order for a loan program to meet students’ needs, it should make money available on terms that make repayment compatible with income during postgraduate training and the early years of professional practice. Therefore, in addition to having the necessary amount of money available for loans, repayment must be at a reasonable interest rate and have a deferment option that postpones the burden of repayment to a time when income will be commensurate with the repayment schedule. The immediate crisis facing students in higher education today is the decreasing availability of money with these desirable characteristics.

It is fortunate for the Yale School of Medicine that at this crucial time, Dr. Leona Baumgartner has made a substantial gift to the Student Revolving Loan Program, and that she did this in a way which encourages others to join in the support of our students. Adequate financial aid is imperative so that we can continue our current admission policy based on scholastic achievement, not on the ability to pay. It is also important that our graduates be able to choose the specialty and location of practice uninfluenced by the magnitude of their debts.

Over the years the Yale Medical School Alumni Fund income has been designated by the Dean to be used for student financial aid. The current Alumni Fund annual giving will be added to our Student Revolving Loan Funds. The Leona Baumgartner challenge provides an exceptionally fine way to support this effort. I can assure you that the need is great.
Dr. Lerner is Honored

Dr. Aaron B. Lerner, professor and chairman of the Department of Dermatology since 1958, received the 1981 Lita Annenberg Hazen Award for outstanding contributions to clinical research. Dr. Lerner is well known for his research in pigment cell disorders.

The Award cited his important contributions to immunology, endocrinology and neurobiology. "Dr. Lerner's research on pigment cells has advanced our understanding of disorders that involve the color of skin and eyes and has taken science closer to finding a treatment for patients with melanoma," the announcement said. Melanoma, a frequently serious type of cancer, usually involves the melanocytes, or pigment-forming cells in the skin.

Dr. Lerner has also been among the leaders in research in the study of vitiligo, a disorder involving loss of pigment cells. It may also be related to immunologic abnormalities involving the eyes, thyroid, adrenal glands, blood and sometimes, the development of cancer.

Dr. Lerner, who was born in Minneapolis, received his advanced education at the University of Minnesota, earning a B.A. degree cum laude in 1941, and a Ph. D as well as M.D. degree in 1945. Prior to joining the Yale medical faculty in 1955, he had been assistant professor of dermatology at the University of Michigan Medical School, and associate professor of dermatology at the University of Oregon Medical School. In 1961–62 he was a Commonwealth Fellow at the Laboratory of Molecular Biology, England.

The Lita Annenberg Hazen Awards were established in 1979 to honor physicians whose "investigative studies have changed the medical profession's knowledge and consequent treatment of disease." Half of the $100,000 award is given to the scientist whose work is honored; the remainder is subsequently given to the investigator's institution for support of a research fellow or fellows to be chosen by the Award winner. The awards are administered by the Mount Sinai School of Medicine.

Our research in the pigment field has covered much ground, yet our projects are carefully focused and oriented toward well defined goals. One of my most recent concerns has been to obtain adequate funding to keep intact the best group currently working on the biology of pigment cells. This group is important because I have long felt that the problem of melanomas can be solved and we all want to help with the work that has to be done. Good support from the American Cancer Society and the National Institutes of Health has been and continues to be essential. Much of our work was initially of real interest only to those few people concerned with the biology and chemistry of pigment cells. It was only after we used melanocytes in the isolation and characterization of the melanocyte stimulating hormones from the intermediate lobe of the pituitary gland and melatonin from the pineal gland that numerous investigators realized the great value of these cells for research in neuroendocrinology. Pigment cells arise from neural tissue and are responsive to factors from the intermediate lobe of the pituitary gland and the pineal gland. It is remarkable that our work on pigment cells has provided the handles that were so necessary for the study of these elusive structures. There has been an explosion of useful knowledge of both glands and in neuroendocrinology in general. Melanocytes were also used by Sutherland, Bitensky, Pastan, Hadley, ourselves and others to advance the "second messenger" concept of hormone action.

A satisfactory treatment for melanomas may arise from general advances in oncology or from an unexpected source, but until that happens we shall continue on our own long march. Our present efforts combine three approaches.
We are seeking a full understanding of the receptors for the melanocyte stimulating hormone; the cytotoxicity of products from reactions catalyzed by tyrosinase; and the immunology of pigment cells. These projects may appear overwhelming but I believe that the only important missing link is a strain of mouse that develops vitiligo, to be used for the immunologic work. While it was indeed strange that melanocytes provided the leads for research into the pituitary and pineal glands it is still more surprising that knowledge of vitiligo may bring us to the solution of melanomas. There is hardly a disorder that has attracted less attention than vitiligo, and yet the association of depigmentation with autoimmune disorders of the thyroid, parathyroid, adrenal and thymus glands, as well as with pernicious anemia and melanomas, appears to be the Rosetta stone that holds the clues to a useful therapy for patients with melanomas. Years of clinical and laboratory experience have brought me to this conclusion.

Vitiligo occurs in dogs, cats, pigs, horses, elephants, fish, chickens and other animals. All animals with pigment cells should have the potential to develop vitiligo. Chickens of a certain genotype, a year after hatching, lose all their pigment, become blind and develop thyroiditis. Removal of the bursa, the source of B cells, decreases the incidence and delays the onset of these changes. We need a mouse model similar to the chicken. When we are able to examine the growth of melanomas in mice that develop vitiligo we may be in a position to understand the role of immunologic surveillance in the spontaneous regression of tumors. Combining this understanding with information on the nature of receptors for MSH and the cytotoxic intermediates formed during melanin biosynthesis, we shall have all the basic knowledge required to develop a useful treatment for patients with melanomas. The cost of obtaining all this information is large but finite — between two and three hundred million dollars, the cost of two Awacs planes.
Appointment of Three Faculty Members to Named Chairs Announced

Three members of the School of Medicine faculty have been appointed to named professorships. Dr. Lawrence S. Cohen has been appointed Ebenezer K. Hunt Professor of Medicine; Dr. Robert M. Donaldson, Jr. has been appointed David Paige Smith Professor of Medicine; and Dr. Paul Greengard has been appointed Henry F. Bronson Professor of Pharmacology.

The Ebenezer K. Hunt Professorship was bequeathed to Yale by Mrs. Mary Crosby Hunt in 1896 in memory of her husband. Dr. Hunt, who was an alumnus of Yale College Class of 1833, received his M.D. degree from Jefferson Medical College. He practiced medicine in Hartford for many years and was president of the Connecticut Medical Society in 1863-64.

The David Paige Smith Professorship was established in 1912. It honors Dr. Smith who was professor of the Theory and Practice of Medicine from 1873 to 1877, and professor of the Principles and Practice of Surgery from 1877 until his death in 1880.

Originally designated as a chair in comparative anatomy, the Henry F. Bronson Professorship was reassigned to the Department of Pharmacology by recent action of the Yale Corporation. It was established in 1889 through a gift of Dr. Bronson, a member of the Yale medical class of 1827.

Dr. Lawrence S. Cohen, Ebenezer K. Hunt Professor of Medicine

A noted cardiologist, Dr. Cohen has been professor of medicine here since 1970, and was chief of cardiology from 1960 to 1970.

A graduate of Harvard College, he received his M.D. degree from New York University School of Medicine in 1958. He first came to New Haven as an intern at Yale-New Haven Hospital, where he also served his assistant residency. From 1962 to 1964, he was a research fellow in cardiology at The Peter Bent Brigham Hospital in Boston, and assistant in medicine at Harvard Medical School. He was senior investigator and head of Clinical Service, Cardiology Branch of the National Heart Institute for three years prior to his appointment in 1968 as chief of clinical cardiology and professor of medicine at the University of Texas (Southwestern) Medical School at Dallas.

Active for many years in the American Heart Association, Dr. Cohen was named "Man of the Year" in 1980 by the South Central Connecticut Chapter. He is a member of several professional and honor societies and is a fellow of the American College of Cardiology, the American College of Physicians, and the Council on Clinical Cardiology of the American Heart Association. He serves on the editorial boards of the American Journal of Cardiology, Primary Cardiology, Cardiovascular Medicine, and American Heart Journal.

Dr. Robert M. Donaldson, Jr., David Paige Smith Professor of Medicine

Dr. Donaldson, who is vice-chairman of the Department of Internal Medicine and chief of Medical Services at the Veterans Administration Medical Center in West Haven, is a leader in the field of gastroenterology. He came here in 1973 from the Boston University School of Medicine, where he had been head of the Gastroenterology Section and professor of medicine.

After receiving a B.S. degree with high honors from Yale University, Dr. Donaldson studied medicine at Boston University School of Medicine, where he received an M.D. degree, cum laude, in 1952. He was an intern at Montreal General Hospital and a resident in internal medicine at Boston Veterans Administration Hospital. From 1957 to 1959, he was United States Public Health Service Fellow in gastroenterology at Peter Bent Brigham Hospital and assistant in medicine at Harvard Medical School. He was appointed to the faculty of the Boston University School of Medicine in 1959.

A member of a number of professional societies, Dr. Donaldson served as president and is a member of the governing board of the American Gastroenterology Association. The author of numerous abstracts and papers on gastroenterology, he served as editor of Gastroenterology from 1970 to 1977, and is a member of the editorial committee of the Journal of Clinical Investigation.
Dr. Paul Greengard, a leading authority on the pharmacology and biochemistry of the nervous system was appointed to the Yale faculty in 1968. Prior to his appointment to the Bronson Professorship, he had been professor of pharmacology and psychiatry.

A pioneer in the field of cyclic nucleotide research, Dr. Greengard is well known for his investigations on the phosphorylation of membrane proteins and its potential role in nerve transmission. His work has been recognized by numerous awards and honors, including election to the National Academy of Science, as well as to the American Academy of Arts and Sciences in 1978. In 1980, he received the New York Academy of Sciences’ Award in Biological and Medical Sciences, and last year he was appointed an Andrew D. Bluestein Professor at the Yale School of Medicine and chairman of the Department of Radiology at the University of Arizona College of Medicine, spoke on “Medical Imagery — 1990”.

The lecture series was established through a contribution to The Campaign For Yale by Dr. Bluestein, a member of the Class of 1946. A pioneer in the field of radiology, he was one of the first physicians in the United States to use cobalt in the treatment of malignant disease. In the 1950’s, he pioneered in the use of radioisotopes as a diagnostic procedure.

Dr. Bluestein, who is attending radiologist at Chilton Memorial Hospital and Barnert Memorial Hospital in New Jersey, is assistant professor of radiology at Mt. Sinai Medical School. A former member of the Hospital Planning Council for Northern New Jersey, he is a member of the Board of Directors and of the Executive Committee of the New York City Opera.

A lectureship honoring Dr. Jack R. Cooper has been established in the Department of Pharmacology through a gift of Dr. Mohandas M. Kini. The first annual lecture was given on February 19 by Dr. Jon Lindstrom of the Salk Institute in San Diego.

Dr. Cooper, who is professor of pharmacology, is well known for his research in the field of neurochemistry, and especially for his contributions to new knowledge of the neurotransmitter, acetylcholine, and of the role of thiamine in nervous tissue. He became a member of the Yale medical faculty in 1956, and has been a Special Fellow of the U.S. Public Health Service in London, England (1965–66), and visiting professor at Hebrew University, Israel (1973).

A graduate of Queens University, Kingston, Ontario, he received both his M.A. and Ph.D. degrees in biochemistry from George Washington University. From 1952 to 1954, he was Smith, Kline and French Research Fellow of the National Heart Institute. He is a member of the Advisory Board of the USA-Israel Binational Science Foundation. The co-author of Biochemical Basis of Neuropharmacology, now in its fourth printing, Dr. Cooper serves on the editorial boards of Biochemical Pharmacology, Neurochemical Research, and the Journal of Neurochemistry.

Dr. Kini, who received his Ph.D. degree from McGill University in 1960 and M.D. degree from Yale University in 1965, is chief of Retina Services at Boston University Medical Center, and assistant professor of ophthalmology at Boston University School of Medicine. He did research in Dr. Cooper’s laboratory while he was a postgraduate student at Yale.

Dr. Brieger Delivers Fulton Memorial Lecture

The fourth annual John F. Fulton Memorial Lecture was given on October 30 by Dr. Gert Brieger, professor and chairman of the Department of the History of Health Sciences, University of California, San Francisco. The lecture was entitled “Early Ambulation: A Case Study in the History of Surgery”.

Dr. Brieger received his M.D. degree from U.C.L.A., his M.P.H. degree from the Harvard School of Public Health, and his Ph.D. degree in history from Johns Hopkins University. He is president of the American Association for the History of Medicine.

The lecture is named for the late John F. Fulton, Sterling Professor of the History of Medicine at Yale, and is funded by a gift from Dr. Bern Dibner, Director of the Burnaby Library, Norwalk, Connecticut. A committee of the Beaumont Medical Club selects a Fulton Fellow annually.
Faculty Notes

The 1981 C.E.-A. Winslow Award was presented to Dr. Robert W. McCollum, who is recognized internationally for his research on hepatitis. The award, which is presented annually by the Connecticut Public Health Association, is given to an outstanding professional in the field of public health. It was established to honor the memory of the founder of the Department of Public Health at Yale. Dr. McCollum retired as Susan Dwight Bliss Professor and chairman of the Department of Epidemiology and Public Health on January 1, to become dean of the Dartmouth Medical School.

The National Academy of Sciences presented the 1982 U.S. Steel Foundation Award in Molecular Biology to Dr. Joan A. Steitz, professor of molecular biophysics and biochemistry. Established in 1961 to recognize notable discoveries by young scientists in the field of molecular biology, the award cites Dr. Steitz's contribution to the understanding of how RNA molecules are recognized and synthesized by enzymes, and discovering the roles played by small ribonucleoprotein molecules in RNA processing.

Among the first delegation of the American Psychiatric Association to visit China, were Dr. Donald J. Cohen, professor of pediatrics, psychiatry and psychology, and Dr. Boris Astrachan, professor of psychiatry and director of the Connecticut Mental Health Center. In addition to visiting major psychiatric centers in the People's Republic of China, they presented papers at the first Chinese symposium on schizophrenia. It was their impression that ideas about psychiatric disorders in China generally are similar to those held by psychiatrists in the United States.

The 1982 Kappa Delta Award for outstanding research in orthopedic surgery was presented to Dr. Gary E. Friedlaender, associate professor of surgery (orthopedic). The awards are given annually by a joint committee of the American Academy of Orthopaedic Surgeons and the Orthopaedic Research Society. Dr. Friedlaender was recognized for his development of guidelines for the safe and effective banking of musculoskeletal tissues and for concepts for clinical application of bone allografts following traumatic, degenerative or neoplastic diseases of the skeleton.

Seven members of the faculty were named American Association for the Advancement of Science Fellows at the Association's annual meeting held in January. They are Dr. Alvan R. Feinstein, professor of medicine and epidemiology; Dr. Robert E. Handschumacher, professor of pharmacology; Dr. Kenneth K. Kidd, associate professor of human genetics; Dr. Frederic M. Richards, the Henry Ford II Professor of Molecular Biophysics and Biochemistry; Dr. Leon E. Rosenberg, professor and chairman of the Department of Human Genetics; and Dr. Sherman M. Weissman, professor of human genetics, medicine, and molecular biophysics and biochemistry. A fellow of the AAAS is "a member whose efforts on behalf of the advancement of science or its applications are scientifically or socially distinguished."

Dr. James L. Boyer, professor of medicine and director of the Liver Study Unit, and Dr. Joyce D. Gryboski, professor of pediatrics, have been appointed to the National Digestive Diseases Advisory Board. Dr. Boyer was also named vice-chairman of the Board, which was established in 1980 to recommend to Congress and the Secretary of Health and Human Services ways to combat digestive diseases, a leading cause of death and disability in the United States.

The 1981 Macomber Lecture at Harvard Medical School was delivered by Dr. Philip M. Sarrel, associate professor of obstetrics and gynecology and psychiatry. His topic was "The Psychosocial Aspects of Childbirth". The Macomber Lecture was established to provide lectures by guest speakers to undergraduate students on subjects of sexuality in the field of human reproduction and reproductive biology.

Dr. Gilbert H. Glaser, professor and chairman of the Department of Neurology, has returned from a full term leave of absence spent mainly conducting research as a visiting professor at The Park Hospital, Oxford, England, the National Centre for Children with Epilepsy in Great Britain. He also was designated a Fulbright Distinguished Professor during the month of October in Yugoslavia, where he gave a series of lectures and conferences in the University Departments of Neurology and Neurosciences in Zagreb and Rijeka.

Dr. John A. Kirchner, professor of otolaryngology, delivered the Semmon Lecture at the Royal Society of Medicine in London in November. Sir Felix Semmon was well known for his work in laryngology, and in 1881, "Semon's Law" of laryngeal paralysis was published. In his lecture, Dr. Kirchner examined this disorder as seen a century later.

Dr. George A. Silver, professor of public health and Institution for Social and Policy Studies, has been elected a senior member of the Institute of Medicine. Chartered in 1970 by the National Academy of Sciences, the Institute of Medicine enlists distinguished members of medical and other professions for the examination of policy matters pertaining to public health.

New Books by Faculty


Yale Medical Historians Contribute to Classics of Medicine Library

An English translation of "The Etiology, the Concept and the Prophylaxis of Childbed Fever" by Ignac Semmelweis has recently been privately printed for the members of The Classics of Medicine Library. The elegantly bound volume also contains translations of the Semmelweis "Open Letters" prepared by Dr. Sherwin Nuland, assistant clinical professor of surgery, and Ferenc Gyorgyey, medical historical librarian at the Yale Medical Library. Dr. Nuland's article, "The Enigma of Semmelweis — an Interpretation", from the Journal of the History of Medicine and Allied Sciences is also included. The Classics of Medicine Library is a division of Gryphon Editions, Ltd., Birmingham, Alabama.
Robert Holt Green, M.D.

Dr. Robert H. Green, clinical professor of medicine and formerly professor of pathology and medicine, died at his home in Madison, Connecticut on December 25. He was 70 years old.

A native of Charleston, South Carolina, he received his B.A. degree from the University of the South in 1933 and graduated from the Johns Hopkins University School of Medicine in 1938. Following an internship at Strong Memorial Hospital in Rochester, New York, and post graduate training in internal medicine at Western Reserve University Hospital in Cleveland, he was appointed a National Research Council Fellow in the medical sciences at the Rockefeller Institute. Dr. Green served four years in the U.S. Navy during World War II and was discharged in 1946 with the rank of lieutenant commander. He returned to the Rockefeller Institute for a year prior to joining the Yale faculty in 1947 as an assistant professor of medicine. He was promoted to associate professor in 1950.

In the mid-1950's Dr. Green was engaged in practice of internal medicine in Madison; however, he returned to the full-time faculty at Yale in 1957 as an associate professor of preventive medicine working with Dr. John R. Paul. From 1960 to 1967 he served as associate professor and professor at New York University School of Medicine. During this period he was associate scientific director of the Health Research Council of the City of New York and later chief of the medical service at the Manhattan Veterans Administration Hospital. He returned to Connecticut in 1967 as associate chief of staff for research at the West Haven Veterans Administration Hospital and professor of medicine at Yale.

Then in 1969 Dr. Green responded to a call from his homeland and served as dean and professor of medicine at the Medical University of South Carolina until 1970. When he came back to Yale, he was appointed professor of pathology and medicine and resumed his position at the Veterans Administration Hospital. In 1974 he joined the staff of the Middlesex Memorial Hospital in Middletown, Connecticut as chairman of the Department of Medicine and continued his association with Yale as a clinical professor of medicine.

During his career as a medical scientist, Dr. Green did extensive research on the epidemiological and clinical aspects of a variety of virus diseases, especially rubella and influenza. He also studied the effects of virus infections on persons suffering from bronchitis and emphysema. He was a member of the American Association of Immunologists, the American Society for Clinical Investigation, the Infectious Diseases Society of America and various other professional organizations.

In speaking of Dr. Green's service as chief of medicine since 1974, the Middlesex Memorial Hospital president said, "Dr. Green was one of the most outstanding physicians this institution has known in terms of his contributions to the quality of patient care here. . . . He worked in quiet, effective ways, offering unique and special contributions too extensive to be innumerable.

Dr. Green is survived by his wife, Audrey Johnston, two sons and a daughter.

Theodore Schlosser Evans, M.D.

Dr. Theodore S. Evans, clinical professor emeritus of medicine, died on January 25, 1982 at the age of 86 following a long illness.

A graduate of Phillips Exeter Academy, Dr. Evans received his B.A. degree from Yale College in 1917 and a B.S. Degree in 1919 from Columbia University. In 1921 he received his M.D. from the Columbia University College of Physicians and Surgeons. He interned at the House of Mercy Hospital in Pittsfield, Massachusetts and then served as a resident physician at Roosevelt Hospital in New York City from 1922 to 1924, when he located in New Haven.

He joined the Yale School of Medicine faculty in 1933 as a clinical instructor of medicine. He was promoted to assistant clinical professor and subsequently to associate clinical professor. In 1952 he was promoted to the rank of clinical professor. He was given an emeritus title when he retired from the active faculty in 1964; however, he continued to be active professionally until 1976.

Dr. Evans was one of the first physicians in this area to specialize in hematology, and he won wide acclaim in that field. For many years he was chief of the medical service at the Grace Unit of Grace-New Haven Hospital and director of the Hematology Clinic. He also had been chief of medical services at the Hospital of St. Raphael in New Haven and the Griffin Hospital in Derby. He was a fellow of the American College of Physicians, a member of the International Society of Hematology, and had served as president of the New Haven Medical Association.

Throughout his medical career in New Haven, Dr. Evans was a dedicated teacher of medical students and house staff. On his retirement from the active faculty, Dean Vernon Lippard wrote as follows: "Your loyalty and support of the highest ideals in medical education and medical care have been demonstrated on many occasions, and the position you have held in the medical community has made your support effective."

Cyrus Robert Friedman, M.D.

Dr. Cyrus R. Friedman, associate clinical professor of psychiatry, died suddenly following a brief illness.

Dr. Friedman was born in New York City in December 1923. After receiving his B.A. from Cornell University and his M.D. in 1946 from Cornell Medical College, he interned at the Sinai Hospital in Baltimore, Maryland and then served for two years in the Army Medical Corps.

He began his residency in psychiatry in 1950 at the Winter Veterans Administration Hospital in Topeka, Kansas and was simultaneously a fellow at the Menninger School of Psychiatry. In 1952 he moved to the Austen Riggs Center in Stockbridge, Massachusetts to complete his training. From 1955 to 1959 he was a member of the staff at the Austen Riggs Center and had a private practice in Pittsfield, Massachusetts.

In 1959 Dr. Friedman was appointed chief of the Department of Psychiatry at Mount Zion Hospital in San Francisco, a post which he held until he came to New Haven in 1961 to engage in the private practice of psychiatry and psychoanalysis. He was appointed to the part-time faculty at Yale in 1963 as an assistant clinical professor and was promoted to associate clinical professor in 1971. He was also an attending psychiatrist at the Yale-New Haven Hospital.
A graduate of the Western New England Institute for Psychoanalysis and a fellow of the American Psychiatric Association, Dr. Friedman was a highly respected member of the New Haven psychiatric community. He was regarded by his colleagues to be a very competent clinician and a challenging and effective teacher.

Dr. Friedman is survived by his wife, Carolyn Jaffe Friedman, and their daughter, Margaret, and son, David.

Anil N. Jayawardena, Ph.D.

Dr. Anil N. Jayawardena, a research associate in epidemiology and public health, died suddenly, apparently of a cardiac arrest, on December 20, 1981 at the age of 35.

Dr. Jayawardena came to Yale in 1975 as a postdoctoral associate in the Department of Pathology. Born in Sri Lanka, he attended the University of Ceylon and graduated with the B.Sc. degree with honors in Zoology in 1969. He then went to England and received his Ph.D. in 1975 from the University of London, where he had served as a Commonwealth Scholar. Prior to coming to the United States, he worked as a postdoctoral research fellow in the Department of Immunology at Middlesex Hospital Medical School in London.

From 1976 to 1978, Dr. Jayawardena held a James Hudson Brown Memorial Fellowship in pathology at Yale and worked with Dr. Byron H. Waksman on the role of suppressor T-cells in an animal model of trypanosomiasis. In 1978 he was appointed as a research associate in pathology, and in 1980 his appointment was in epidemiology and public health. Throughout this period he continued his immunologic research in experimental trypanosomiasis and received support from the National Institutes of Health and the Rockefeller Foundation.

Dr. Jayawardena was considered by his colleagues to be an exceptional individual and a profoundly competent investigator. The sudden unexpected death of this extremely promising young scientist was a great shock to all those who knew him.

The interior of the Hope Building, when the central area on the first floor was used as a waiting room for the clinic — circa 1925–30.
and its balustrade, terrazzo from the first floor, wood detailing and brackets, and marble slab counters. Some of these, as well as the lecture hall and the amphitheater, are incorporated into the renovation plans.

By the late 1960's, it was evident that the building, as it was originally designed, was impractical for modern use in a medical school where space is, to put it mildly, at a premium. Further, the open design, however appealing esthetically, did not meet contemporary building fire and safety codes.

Fortunately, suggestions for demolition of the Hope Building were rejected in favor of renovation to create much needed new teaching space. The final design by architect Alexander Purves reflects a fine sensitivity both to the historical and architectural qualities of the building in a design that is a well executed adaptation of the interior to more practical use as an educational center.

When work is completed sometime this summer, two new auditoriums, one on the first floor, the other directly above, each with a capacity for 150 people; ten seminar rooms and the existing small lecture hall will be available for use by medical classes, as well as for conferences and convocations. Exhibition galleries, lounges, a snack canteen and a catering kitchen to serve day-long events, will add much needed amenities to the facilities at the School of Medicine.

There are also plans, temporarily shelved for a lack of funding, to renovate the amphitheater. These plans are described here by Mr. Purves.

The historic amphitheater is both the symbolic and the architectural heart of the Hope Building. It is the oldest surviving teaching space at the School of Medicine, and it forms the core of the renovated building. Over time, as the room ceased to be used for its original purpose as a surgical amphitheater, it fell on sad days. Previous renovations to other areas began to encroach on the space, and mechanical ducts were run through it as they would be through any other unused abandoned space.

The amphitheater, with its steeply rising curved tiers of seats — like a small Greek theater — was the most unusual and architecturally striking space in the old building. The current renovations will retain the unique character of the room and will restore it to its appropriate place as a vital teaching space at the center of the building. Certain minor modifications to the original room will be made to make it safer, more easily accessible, and more serviceable as a teaching space. A new entrance at each side will lead directly from the first floor to the lowest tier of seats. The floor of the pit will be slightly raised so that it will suitable for lectures. A chalk board will be inserted within the old window frame on the front wall, and the original skylight, which had been partially destroyed, will be replaced by a new one in the same location. Enough of the original seats survived so that they may be reconditioned and reinstalled.

The room itself is of such a strong architectural character and creates such a dramatic ambience that it is likely that a greater variety of uses will be found for it in addition to that of a lecture room. It would incidentally, be ideally suited to small stage productions or chamber music performances. But the intention of the renovation is to modify the room only as necessary to make it serve as a teaching space while retaining its unique architectural character as well as its unique place in the history of the Yale School of Medicine.
The Alumni in Medicine Column

Notes from the President

Nicholas P. R. Spinelli, M.D.

Welcome to a new column. We intend in future issues to present subjects for discussion which are of interest to you, ones which hopefully many of you have suggested.

Our purpose is communication, among ourselves and for ourselves. A first and pertinent question is who "ourselves" may be — Who are the Yale alumni/alumnae in medicine in 1982? Across the span from our oldest graduates from the Class of 1906 to those of 1982, there is great professional, geographic, and ethnic variety. Our alumni ranks began with physicians, but with the growth of our organization we have added to the roster public health professionals, house staff and fellows, and recently the physician associates.

Lastly, but so importantly, the current Yale medical student deserves attention, and perhaps some orientation, in this context. We are students so briefly, and alumni forever thereafter. Students should be viewed as the embryo alumni they are, and we probably owe them an orientation to the sense of responsibilities and opportunities which the alumni status provides. Of particular interest to all of us would be the portrait of the Yale medical student in 1982. Does their experience parallel those of the generations of graduates who remember the Yale system of medical education so unique and so extraordinary? A future column or article should be devoted to them so that they can present their self-portrait.

Most of the many graduates who elected to remain active in alumni affairs are involved in the fund-raising process which addresses various needs of our School and especially those of our current students. Who are these dedicated people and what gratification do they derive from their effort? Ros Gallagher ('30), for example, has for the many years since its inception chaired, in a low-key way, our Medical School Alumni Fund's Bequest and Endowment program. Aided by Sam Kushlan ('35), why did he last year pursue this effort in a more high-keyed way? What are the implications of such activities concerning the future of American medical education? In a forthcoming column, we shall have you meet Ros and Sam and let them state their case.

We visualize communication in this column as a dialogue. Since a dialogue does not flow in one direction, we shall need your suggestions, reactions, and volunteered expertise to make this enterprise successful. The chair may be yours.

Class Notes

1930
The third edition of "Hand Surgery" by J. Edward Flynn has recently been published by Williams & Wilkins. Dr. Flynn is clinical professor of surgery emeritus at Tufts University School of Medicine and chief, Hand Surgical Service at the Veterans Administration Hospital in Boston.

1940
Crawford Campbell wrote recently: "We have semiretired, although I spend five months a year at the Mass. Gen. Hospital in the Department of Orthopaedics working in the field of pathophysiology of the bones and joints, and another three months in other universities teaching in the same field. Our major home is on Squam Lake in New Hampshire and we have a condominium on Commonwealth Avenue in Boston."

1941
Robert Areson has been appointed full-time corporate medical director of Union Camp Corporation in New Jersey, a position he has held on a part-time basis since 1969.

Dr. Areson will develop company health policies and coordinate the activities of other company physicians, while continuing to provide medical services at the Wayne (N.J.) headquarters. He will also serve as the company's representative on industry health committees.

Dr. Areson has published several articles on diabetes and serves as chairman and president of the Camp Nejeda Foundation, which operates a camp for diabetic children in Stillwater, New Jersey. Among his professional honors are citations from the New Jersey Diabetes Association and from the Board of Trustees and medical staff of Mountainside Hospital, Montclair, for his service as president of the medical staff. He resides in Little Falls, New Jersey.

1944
Laurence Roth, in private practice in Batavia, New York, has been elected to a three-year term as chairman and president of the Camp Nejeda Foundation, which operates a camp for diabetic children in Stillwater, New Jersey. Among his professional honors are citations from the New Jersey Diabetes Association and from the Board of Trustees and medical staff of Mountainside Hospital, Montclair, for his service as president of the medical staff. He resides in Little Falls, New Jersey.
at State University of New York at Buffalo School of Medicine and clinical instructor at University of Rochester School of Medicine and Dentistry. In addition, he is affiliated with Genesee Memorial Hospital in Batavia.

Dr. Roth is also a fellow of the American College of Surgeons and a member and past president of the Buffalo Gynecologic and Obstetric Society.

1950
John Strauss, professor and head of the Department of Dermatology at University of Iowa College of Medicine has been selected as president-elect of the American Academy of Dermatology. In addition to having held many positions in the Academy during the past 25 years, he is also an assistant editor of the Journal of the American Academy of Dermatology and has served on the editorial board for the Journal of Investigative Dermatology.

Dr. Strauss' activities extend into many aspects of medical education and health care. He is on the Committee on Continuing Medical Education for the Council of Medical Specialty Societies and the Accreditation Review Committee for the Accreditation Council for Continuing Medical Education. He is also an associate director of the Commission on Cutaneous Diseases for the Defense Department and a consultant to the Surgeon General of the United States.

1952

In a review of this work it was noted that "it is important to recognize that Professor Absolon was himself an educator and busy surgeon during this writing... He uses facts, anecdotes, epigrams, conversations, and documents of historic importance, some of which are reaching the outside world for the first time, in a singularly precise way, delivering essentially Billroth the person and surgeon first, and then with less priority, the broad sweep of history. ... The silver quality of Professor Absolon's Surgeon's Surgeon is that his subject was, and is, first and foremost a human being...."

The reviewer of this work, Dr. Stacey B. Day, comments further: "... Few surgical scholars are so well fitted as Karel Absolon to undertake the translation of so much original background information, or to evaluate and appreciate the life of Theodor Billroth as evident in the work of Professor Absolon. This Life is a magnificent endeavor, and it is convincing."

1953
Donnell Etzwiler, pediatrician at St. Louis Park Medical Center and director of the Diabetes Education Center in Minneapolis, has been honored by election to membership in the National Academy of Sciences, institute of Medicine. Dr. Etzwiler is also a past president of the American Diabetes Association and is currently a vice president of the International Diabetes Federation.

Jose Ramirez Rivera, Director of the Western Consortium of Medical Education and professor of Medicine at the University of Puerto Rico has received an award as "the highest value in Medical Education" for 1981 from the Western District of the Puerto Rico Medical Association. Dr. Ramirez is Chairman of the Department of Medicine of the Mayaguez Medical Center and Director of the Rincón Rural Health Initiative Project.

1954
The Uniformed Services University of the Health Sciences has established a Section on Medical History in the University's School of Medicine, and Robert Joy has been appointed the first chairman and professor of medical history. Dr. Joy, until his retirement from the Army in October 1981, had served 27 years in the Medical Corps. He held the rank of colonel and had most recently served as Commandant of Students at the School as well as chairing its Department of Military Medicine and History.

A lively and vivid lecturer, Dr. Joy in 1980 received the first William P. Clements Award which is given annually at the University, as it is at the service academies, to the uniformed faculty member considered by the students to be their best teacher.

At a retirement ceremony on October 30, Dr. Jay Sanford, Dean of the School of Medicine, referred to Dr. Joy's retirement as a "transition" rather than a goodbye. Then, as Dr. Joy's mother, wife, and daughter looked on, Dean Sanford presented him with the Army's Distinguished Service Medal, the highest award that an active duty military officer can receive in a non-combat role.

1956
William Hindle wrote recently from Honolulu. He has been elected for a third term as treasurer of the Hawaii Medical Association.

1960
John Davis, state director of research for the Illinois Department of Mental Health and director of research at the Illinois State Psychiatric Institute in Chicago, has been appointed the first Gilman Professor in the College of Medicine, University of Illinois at the Medical Center, Chicago. He has also been named a research professor in the College's Department of Psychiatry.

Internationally known for his work in the fields of psychopharmacology and psychiatric depression, he has served as consultant to the Food and Drug Administration, the National Academy of Science, National Institute for Mental Health, the President's Commission on Mental Health, and the National Commission on Marijuana and Drug Abuse.

1964
An impressive health care system is being developed in Bogota, Colombia, South America by the Fundacion Santa Fe de Bogota (F.S.F.B.). Of the six founders of this Colombian Institution, two are Yale medical school alumni: Alfonso Esguerra and Jose Felix Patino, '52. Dr. Esguerra is the general director of F.S.F.B. Dr. Patino is the chairman of the Department of Surgery at the medical center being developed by F.S.F.B.

The medical center will open in mid-1982. Its 200-bed hospital will provide a full range of in- and outpatient services. All full-time physicians and those clinical physicians actively participating in the teaching programs of the medical center will have academic appointments at the University of the Andes.

1965
William Grossman, formerly director of the cardiac catheterization laboratory at Brigham and Women's Hospital in Boston, has been appointed director...
of the cardiovascular division at Boston's Beth Israel Hospital and promoted to professor of medicine at Harvard Medical School. He is particularly interested in new developments in the treatment of patients with acute myocardial infarction. Dr. Grossman is the author of the textbook, 'Cardiac Catheterization and Angiography' which is now in its second edition and is the standard of reference in his field.

1966
Arne Younberg, an attending radiologist at Waterbury (Conn.) Hospital is vice chairman for the Medical Staff Division of the Waterbury Hospital's 1982 Annual Appeal. The Annual Appeal seeks support each year in Waterbury and surrounding towns to help fund the purchase of new and replacement medical equipment.

1970
Daniel Dedrick is an assistant professor of anesthesia at The Pennsylvania State University College of Medicine at The Milton S. Hershey Medical Center in Hershey, Pennsylvania. His wife, Dr. Carolyn Dedrick, a former member of the class of 1973, is an assistant professor of radiology at The Pennsylvania State University College of Medicine.

1972
John Foster is now practicing diagnostic radiology at the Westerly Hospital in Westerly, Rhode Island. He and his wife, Barbara, are living just across the border in Mystic, Connecticut with their two children, Ainslie and Jonathan.

John Fulkerson is assistant professor of orthopedic surgery and director of the Sports Injury and Knee Clinic at the University of Connecticut School of Medicine in Farmington.

In January, Fred Hyde participated in a two-day seminar in Washington, D.C. on "Capital Financings and Refinancings for Health Care Facilities" sponsored by The National Health Lawyers Association. Dr. Hyde spoke on "The Future of the Capital Markets and How to Survive it". Dr. Hyde is vice president and National Health Care Manager at Smith Barney, Harris Upham & Company Incorporated in New York City.

1973
In a letter received from Richard Boland in May, he mentioned that he has "recently run into several former classmates in the past few months, and upon comparing notes, it appears that a very large segment of our class has stayed on (at least this far) in academic medicine."

He notes that he is now assistant professor of medicine at the University of California, San Francisco, where he has been funded to study glycoprotein biochemistry in gastrointestinal cancer; that John Stratton is doing research in cardiology at the University of Washington where he was recently appointed assistant professor of medicine; and that Richard Young became assistant professor of pediatrics at Hershey Medical School (The Pennsylvania State University College of Medicine) a year ago and is doing research in pediatric neurology.

Dr. Boland listed twenty-four other classmates who, "as far as can be ascertained, currently hold academic appointments and are actively involved in research. This list (compiled from the softest of data bases — rumor and recollection) is in excess of one-third of all those we could recall. It may be somewhat overinclusive, and some others may have been overlooked." He'd be interested in having corroborating information about this.

1974
Richard Pasternak, director of the Coronary Care Unit at Pacific Medical Center and clinical instructor in medicine at the University of California in San Francisco has been elected to Fellowship in The American College of Cardiology.

1980
Steve Rosenfeld writes that he and Lisa are enjoying life in St. Louis, Missouri, and that he is pleased with his opthalmology residency at Barnes Hospital.

Public Health
1965
Elliot Segal, staff director of the Oversight Subcommittee of the House Commerce Committee is leaving Capitol Hill to become manager of health care cost containment programs for the William Mercer subsidiary of Marsh and McLennan, insurance brokers.

1979
Lisa Rosenfeld is now the director of planning for the Jewish Hospital of St. Louis (Mo.) which is one of three hospitals comprising Washington University Medical Center. Her husband, Steve, is an ophthalmology resident at Barnes Hospital.

House Staff
1960
Richard Norton has been promoted to professor of medicine at Tufts University School of Medicine. He is in the Section of Gastroenterology and is located at the New England Medical Center Hospital in Boston.

1976
Louis Wang announces his association with Drs. Howard Smith and David Roberts as a member of the Connecticut Ear, Nose and Throat and Facial Plastic Surgery Associates for the practice of otolaryngology, facial plastic surgery and head and neck surgery, with offices in Middletown and Essex.

IN MEMORIAM

Oscar S. Proctor, M. D. ex med '19 August 12, 1981
Barnett Greenhouse M. D. '21 October 24, 1981
Herbert C. Soule, Jr. HS '21 July 22, 1981
Chester E. Hurwitz M. D. '22 May 15, 1981
Dexter M. Bullard, M. D. ex med '23 October 5, 1981
Spafford Ackerly M. D. '25 September 24, 1981
Felix F. Tomaino M. D. '29 August 28, 1981
Dana L. Blanchard M. D. '31 December 29, 1981
Morris F. Heller M. D. '31 October 11, 1981
Charles E. Tribble M. D. '31 August 10, 1981
John James Head M. D. '39 (date unknown)
Arthur N. Springall M. P. H. '50 October 4, 1981
MEDICAL SCHOOL ALUMNI WEEKEND PROGRAM

FRIDAY, June 4, 1982

Alumni Registration
Rotunda, Sterling Hall of Medicine

8:00–4:00 Yale School of Nursing Annual Alumnae/i College
“Tomorrow’s Issues Today in Nursing”
Registration, 855 Howard Avenue

8:30–4:30 Yale Alumni in Ophthalmology 1982 Annual Meeting
“Current Concepts in Glaucoma”
Registration, Brady Auditorium, 310 Cedar Street

10:15–11:00 Department of Epidemiology and Public Health Symposia
I. “The Impact of Management and Labor on the Health Care System in the Eighties”
II. “Nuclear Warfare: The Role of the Medical Profession”
Winslow Auditorium, LEPH

1:55–3:00 Department of Epidemiology and Public Health Seminars
I. “Do We Really Need Infectious Disease Epidemiology?”
II. “The Statistical Needs of the Biomedical Researcher: Some Observations and Suggestions from a
   Director of a University Biostatistics Consulting Center”
III. “Problems in Conducting Epidemiologic Research”
IV. “Yale Graduates Look at Occupational Health”
   (Locations to be announced)

3:15–4:30 Department of Epidemiology and Public Health Lecture
(To be announced.)

2:00–5:00 Guided Tours — New facilities of the Yale-New Haven Hospital

5:00 Dean’s Reception
Beaumont Room, Sterling Hall of Medicine

SATURDAY, June 5, 1982

Alumni Registration
Rotunda, Sterling Hall of Medicine

9:00–11:00 Coffee Service
Beaumont Room, Sterling Hall of Medicine

9:15–9:45 Special Alumni Symposium
“Yale Today”
A. Bartlett Giamatti, President, Yale University
Historical Library, Sterling Hall of Medicine

10:00–11:45 Seminars
I. “Gene Splicing in Biomedical Research”
II. “Efforts at Yale in Caring for the Elderly”
III. “The Graying of America: Implications for Health Care”
IV. “From the Bench to the Clinic: New Treatments for Depression and Opiate Withdrawal”
   (Locations to be announced.)

10:00–12:00 Guided Tours — Yale Center for British Art; Historic Section of New Haven

11:45–12:30 Meeting of the Association of Yale Alumni in Public Health
Winslow Auditorium, LEPH

12:00–12:30 Annual Meeting of the Association of Yale Alumni in Medicine
Harkness Auditorium

12:30–2:00 Sherry and Buffet Luncheon
Harkness Lounge and Dining Hall

2:00 Guided Tours — New Facilities of the Yale-New Haven Hospital

3:00–4:15 Guided Tours — Yale Center for British Art; Historic Section of New Haven

4:30–6:00 Social Hour
Beaumont Room, Sterling Hall of Medicine
Immunology at Yale
A Very Personal Survival Kit for the 1980's and Beyond
Transplantation Antigens: Markers of Individuality, Love and Disease
The Helper T Cells
Immortalization of the Thymus Derived Lymphocyte
Immunology: an Approach to Health Problems of the Third World
Medical Illustration: a Picture is Worth More...
Office of Graduate and Continuing Education at Yale
Letters to the Editor
Here and About
Alumni News
Class of 1982
First Year Postgraduate Appointments

Cover:
The cardinal positions of gaze was drawn by Patrick Lynch for Dr. Caleb Gonzalez. The illustration will appear in Strabismus and Ocular Motility, to be published by Williams and Wilkins.
The Human Immune System:
A Very Personal Survival Kit for the 1980's and Beyond

By John M. Dwyer, M.D., Ph.D.

Human beings are, among many other things, efficient but complex compilations of biological machinery. As with all mechanisms that substitute intricacies for simplicity, increasing sophistication is associated with increased fragility and vulnerability. As is true of many human endeavors, the biological systems of most individuals do well in isolation; delicately poised mechanisms, allowed the luxury of total introspection, perform with single-minded efficiency. Trouble comes, however, when these biological systems must contend with a hostile environment. While all of the above generalities are true at a psychological level, we are here concerned with aggression that is very definitely at the physical level and most frequently posed by man’s most ancient and constant enemy — microbes. Virus, fungi, bacteria and parasites abound in our environment, and were it not for a very active protective (immune) system, we humans, despite our superb intellects, ingratiating sociability and advanced knowledge of how our body works, would be extinct.

Our protective or immune system has been subjected to intensive basic and clinical research in the past two decades. What has been learned is of the greatest practical importance as it allows physicians, among other things, to make better vaccines, transplant organs, improve the cure rate for cancer, understand and better manage allergies, and, for the first time, approach scientifically many of the chronic diseases of mankind. Altogether apart from its practical importance, however, the details of the evolution of a protective system that can handle the microbial enemy and the manner in which it does so makes a fascinating story for anyone remotely interested in biology.

Let’s approach the requirements for an adequate immune system by analogy. Imagine that you are hiring night watchmen for the world’s largest and most sophisticated computer operation, programmed to support systems involved in life and death decision making. Going through

Dr. Dwyer is associate professor of medicine and pediatrics and chief of the Section of Clinical Immunology
a checklist of the essential attributes for candidates you may hire to guard this vital establishment, you would be certain to include the following. Firstly, your night watchman must be sufficiently educated so that he identifies with complete accuracy a true problem when it arises. An intruder into his complex must be distinguished from, for example, other watchmen who superficially may look very similar to the unauthorized entrant. What a tragedy if our watchman made a mistake and shot a fellow guard. Yes, the first attribute sought would be maturity and education sufficient for accuracy in problem identification (recognition).

The second desirable, even essential, attribute for our candidate would be the ability to learn on the job. If the domain under his protection was attacked and our watchman prevailed only after a considerable struggle, we would wish that the memory of his "close encounter of the first kind" would lead to the development of expanded mechanisms capable of more efficiently handling the same invaders should they be foolish enough to attack again. Memory of the inadequacies of the first response would lead to a more efficient secondary response.

Our watchman is of no use to his employers if he cannot respond decisively to any threat to the computer complex. He must be armed so that he can repel the danger. The weapons at his disposal, however, must be used judiciously. The appropriateness of his response will distinguish the really well programmed watchman. No use firing off lots of bullets in all directions. Even if he hits the enemy, the damage to innocent bystander computer mechanisms might be horrendous. Certainly if you were to find a watchman whose every action was appropriate and reliable, you would be likely to make him a supervisor of less well trained individuals. His job would then be one of supervision or regulation of armed but relatively inexperienced (and therefore potentially dangerous) recruits.

The human immune system, of necessity, specializes in accurately recognizing the enemy (antigen), attacking him powerfully but appropriately and using a highly developed memory system that will insulate that adequate preparations are made for more efficiently handling second encounters. As the inflammation that can be initiated by the immune response is so powerful, such a weapon system is very tightly controlled by all important regulatory mechanisms.

The cast of characters that provide us with our immune system is large, but the stars are small white blood cells known as lymphocytes. There are two major classes of lymphocytes; B lymphocytes, so called because they are educated in the bone marrow and T lymphocytes which mature in the microenvironment of a remarkable gland, the thymus, that lies in the chest over those great vessels that enter and leave the heart. Apparently the evolutionary pressures exerted by microorganisms on lower species aspiring to evolve into higher species was of sufficient magnitude and complexity to require the development of two cooperative but distinct weapon systems. It is the job of one to fight bacteria (the B cell system) while the other's function is to fight viral, fungal and parasitic infections (the T cell system).

Humans are armed with about 400 billion of these little "pac-men-like" lymphocytes. Some lymphocytes constantly patrol around the body seeking antigens that may have entered our environment. Others remain stationed in lymph nodes and the spleen, waiting for antigens to be delivered to them in the lymphatic fluid that runs in the specialized lymph vessels that travel throughout the body with our arteries and veins.

The antigen recognition capacity of lymphocytes is individually programmed. Unlike our night watchman who should be able to recognize any and all intruders, any individual lymphocyte is capable of recognizing only one antigen. Cells that can recognize streptococci can't recognize staphylococci. By the time we are born we already have enough lymphocytes to recognize upwards of a million different potential invaders. Like our watchman, these B and T cells are "armed". When a B cell binds antigen to a surface receptor that is designed like an expensive lock that will accept only one very specific key, to bind one specific antigen, it responds by manufacturing and secreting remarkable chemical molecules known as immunoglobulins or antibodies. These molecules can bind to antigens, whereupon they indicate the destruction and removal of this material by harnessing a number of inflammation producing mechanisms that rely heavily on the properties of a none too specific scavenger cell known as a polymorphonuclear cell. T cells work similarly, although the chemicals they secrete are not antibodies but rather lymphokines; reagents that harness another non-specific cell (the monocyte or macrophage) to attack antigens bound by the T cell. Unlike B cells, T cells are themselves pretty good at directly killing many antigens.

Since at any given moment we have to be able to recognize any one of a million different enemies and we are not composed of huge masses of lymphocytes, we do not have many cells that can recognize any one of these antigens. As a result the primary immune response is slow to develop. During the primary encounter with an antigen, however, those cells that do recognize the antigen will divide many times to expand geometrically the population or clone of cells capable of recognizing that particular antigen. The result is a disproportionate accumulation of cells that have been involved (sensitized) in a particular battle. The expanded recognition capacity represents immunological memory and insures a much more potent and rapid secondary response to antigen.

One of nature's biggest immunological mistakes was to program humans with lymphocytes possessing the capacity to recognize their own body constituents as antigens. Thus, apart from having lymphocytes that carry receptors for nonself, we also have both B and T lymphocytes that carry receptors for those structures that represent our own constituent antigens. For most of us this never presents a serious problem because of the presence of supervisory cells that continuously regulate the immune response. There are cells that develop in the thymus, but instead of producing an inflammatory response on encounter with
antigens, they control effector cells. They act as an immunological thermostat, constantly insuring the appropriateness of all that is done by the cells that can produce inflammation. Among the chief responsibilities of these immunoregulators is the maintenance of a state of nonreactivity amongst those lymphocytes capable of reacting with us. Usually these cells work quietly and efficiently, but occasionally (disturbed by drugs or viral infections or because they were not so well educated in the first place — second rate genetic information) they fail to control these potential attackers of self, and autoimmune disease results. Rheumatoid arthritis, systemic lupus erythematosus, thyroid disease, multiple sclerosis, pernicious anemia and myasthenia gravis are but a few of the diseases that can result.

Lymphocytes are rapidly giving up their secrets to scientists, and the results are being felt in everyday medicine. There is, however, still much to be learned about these “night watchmen” and the supporting players with whom they have to interact. It seems reasonable to predict that the explosion of interest in immunology will continue to be a profitable one if as much progress is made in the next 20 years as in the previous two decades. Many scientists and clinicians believe that it will be improvement in our understanding of the immune system and the application of this knowledge that will provide us with our best chance for the next great advance in improving both the quality and quantity of human life. For improvement in the latter, one further major disadvantage of our immune system will have to be overcome. Individual T lymphocytes live for upwards of 60 years and then slowly fade away. As the thymus works for only a few years of post-natal life, we have within the immune system’s classic example of inbuilt obsolescence. Most people reading this will have their biological T cell clock fully wound and ticking nicely but definitely finitely. The eternal elixir of life (when eventually we find it) is certain to contain a good measure of extract of young T cells.

The more one learns about immunology the more fascinated you are likely to become with this subject, and more articles on this subject follow. But apart from intellectual satisfaction, the future of immunology may relate very personally to your own future. After all, the one inescapable disease we all suffer from is aging. You would do well to keep an eye on scientific efforts to unravel the mechanistic prowess of Methuselah’s T cells.

Transplantation Antigens: Markers of Individuality, Love and Disease

By Robert E. Cone, M.D.

In the early 1900’s, tumor biologists were surprised to find that tumors developing in some laboratory mice would not grow when transplanted in other mice. This was quite puzzling. Why should some mice be resistant to the tumor while others were not? Did some mice have the ability to recognize the malignant nature of cancer cells and destroy them, while others lacked this capability? If so, understanding this phenomenon would be an important clue to understanding cancer in humans.

It was subsequently found that resistance to the growth of the transplanted tumor is due not to recognition that the cells are malignant, but rather, to recognition that the cells come from another mouse and are “foreign”. (Studies have shown, in fact, that tumors transplanted from one genetically identical mouse will grow). Animals discriminate “self” from “non-self” or foreigners by examining antigens on the surface of the transplanted cells known as histocompatibility antigens. Over the years, these have been shown to be defined by an area on the 17th chromosome, known as the Major Histocompatibility Complex.

As a result of several events in the last thirty years, the study of histocompatibility in mice and humans has become an important area of research in many laboratories around the world. For instance, when human organ transplantation became feasible, surgeons in the field experienced some of the same frustration felt by the early mouse tumor transplantation biologists: the immune system of recipients of organ transplants defended itself against the foreign intruder. In 1958, the French immunologist, Jean Dausset, discovered antibodies which detected a human leucocyte antigen (HLA). It was then found that disparities in HLA antigens correlated with rejection of organ transplants and the science of histocompatibility testing in humans began.

HLA antigens have now been studied and defined in many ethnic and racial groups throughout the world. An example of the quality and spirit of cooperation in the world-wide scientific community can be found in the degree of information sharing between laboratories working in this field.

Eighty-two different HLA antigens have been defined so that their position on chromosome 6 in humans can be mapped. The genes which determine these antigens can be grouped into at least four positions on the chromosome and the maximum number of combinations of these genes

Dr. Cone is associate professor of pathology and surgery
approaches seven billion. With this many possible combinations, it is easier to draw a royal flush in poker than it is to find two unrelated individuals with identical HLA genes!

For this reason, the immunological problems in organ transplants are considerable. That some individuals who receive an organ transplant from unrelated donors retain the organs for one or many years can be attributed to "the luck of the draw" in histocompatibility matching; or more likely, it can be attributed to the steady improvements in therapeutic modalities which suppress immune rejection of the organ. While the immune response to the graft must be suppressed for successful organ transplantation, there is also great danger of infection if the immune system is completely suppressed. The problem will be solved when methods are refined to suppress only the response to HLA antigens on the transplanted tissue. Research to develop such immunosuppressive "smart bomb" treatments is being done in many laboratories.

The discovery and elucidation of the complexity of HLA antigens has important applications other than those of providing jobs for transplantation immunologists, and frustrations for the transplant surgeon. As a marker for human biologic individuality, histocompatibility testing has important genetic and even legal application. HLA typing of racial and ethnic groups worldwide is of great value to anthropologists. Inclusion of HLA-typing has also been extremely useful in settling legal paternity suits.

In addition to their importance to organ transplantation as well as for markers of human biologic individuality, HLA antigens are also crucial to human well-being. An integral relationship for Major Histocompatibility Complex genes to the immune system was demonstrated first in studies with inbred mouse strains. It was found that certain mouse strains would make a strong immune response to synthetic amino acid polymers while others would not. Genetic studies demonstrated that the relative immune response of mice to these polymers was determined by genes which were "mapped" to the Major Histocompatibility Complex (MHC). These regulatory genes were termed "immune response" (Ir) genes. Moreover, the ability of immune cells to kill cells infected by viruses appears to be restricted by other gene products of MHC. In extrapolating these results with mice to humans, it appears that genes of the MHC can determine how strongly the immune system responds to infectious organisms and, once it responds, how effectively it deals with the foreign invader.

Is such extrapolation warranted? The susceptibility to a number of diseases appears to be associated with MHC genes. The prototype example of this HLA-disease association is the rheumatoid disease, ankylosing spondylitis. Almost 100 percent of patients with this disease possess the HLA antigen B27, although only about 25 percent of the total population carry this antigen. This does not imply that B27 positive individuals are destined to be affected by ankylosing spondylitis, but they are certainly more prone to the disease than B27 negative individuals.

Other diseases demonstrating an HLA-susceptibility association include hayfever, asthma, multiple sclerosis, coeliac disease, and juvenile diabetes, to name a few. Every month new associations, or non-associations, are reported. Many of the diseases showing an association with HLA antigens have in common an inflammatory and/or immune basis. In many, and perhaps all, the actual cause of the disease is unknown.

What are our HLA genes telling us? If the extrapolation of mouse studies to humans mentioned earlier is valid, it may be that the HLA-disease associations are due to an improper response and/or lack of response to our immune system to infectious agents. At least, it is clear that there is a genetic basis for susceptibility to many, and perhaps all disease processes. Understanding the genetic basis for HLA-disease association could help clarify the nature of the complex diseases linked to these genes so that more appropriate therapies can be developed. As the list of HLA-disease susceptibility associations grows, it seems possible there might come a time when the population would be typed for MHC genes. There would then be a list of diseases to be on the alert for and preventive steps could be taken.

Finally, one very recent observation, again made in mice, should be mentioned here. Inbred strains of mice exhibit a preference for strains to which they will mate. This mating preference has been found to be determined by genes mapping to the MHC. It is suspected that females present an odor, possibly a pheromone, which excites, or turns off a male.

In this way, nature uses histocompatibility antigens to help insure the best continuing association of new genetic formulae. For instance, it is much more difficult to propagate animals by inbreeding than it is by outbreeding, because implantation of a fertilized egg is greatly facilitated if the histocompatibility antigens associated with the seminal fluid are very different from those of the mother-to-be. She will make an immune response to these antigens that will cause inflammation in the fallopian tubes or uterus, thus providing a hospitable environment for implantation.

The possibility that human MHC genes may decide whether or not a blind date will succeed has yet to be determined. Perhaps it shouldn't be. Somehow ensuring "love at first sight" by genetics and/or chemistry would take all of the fun and mystique from one of the most basic of human responses. Is nothing sacred anymore?

Clearly, the romance (forgive the word) with histocompatibility genes is not over. New traits governed by these genes are still being described. The demonstration of precisely how these genes work, and perhaps ultimately, the isolation of the genes will further the understanding of how the immune system works, and how it can be modulated to our advantage. Perhaps genetic engineering may someday be used as a method of prevention for certain diseases.
The Helper T Cells

By Charles A. Janeway, M.D.

The initiation of the complex cellular cascade known as the immune response involves recognition of foreign materials, called antigens, by lymphocytes. The principal cells involved in the initiation of these responses are known as helper or inducer T cells. Our research involves an extensive characterization of these cells, presently at the single cell level, using T cells grown from a single progenitor cell, or T cell clone.

Antibody responses can be characterized either quantitatively or qualitatively; that is, the amount of antibody produced can be measured but so too can the class of antibody be determined. Antibodies come in eight distinct forms, each with a different effect or function. We have found that there are two classes of helper T cells, one of which is principally involved in increasing the quantity of antibody produced, while the other modulates the quality of the antibody produced. These cells differ in other properties, and these differences allow us to separate them and to study them as independent entities.

We have focused on three different aspects of recognition by helper T cells: recognition of specific foreign antigens; recognition of antigens encoded on the major histocompatibility complex, the genes that control antigens on tissue cells that serve as the targets recognized by lymphocyte causing rejection of foreign tissue grafts; and recognition of determinants found on antibody molecules.

Our studies of the precision of foreign antigen recognition by T cells demonstrated that individual T lymphocytes are uniquely specific for a particular antigenic determinant. Such cells readily discern very minor changes in antigen structure.

We next turned to a consideration of the role of the major histocompatibility complex (MHC) in antigen recognition by T cells. The MHC consists of a cluster of genetic information that produces not only cell surface antigens that determine our immunological identity, and supply the targets for recognition in the transplant situation, but also produces many influences that regulate immune response. For example, we found that helper T cells are influenced by a region of the major histocompatibility complex that also controls the magnitude of antibody responses, the so-called immune response or Ir genes. These genes have now been shown by our laboratory to encode cell surface antigens expressed in B cells. The helper T cells recognize not just the foreign antigen we inject into the animal but their own Ir gene products as well.

Since only B cells express these Ir gene products, only B cells bear antigen in a form that is recognizable by the helper T cells, and thus T cell help is directed exclusively to such cells. This mechanism is very important in controlling the quantity of antibody produced. Interestingly, genes that encode transplantation antigens recognized as non-self in graft rejection, also encode self recognition markers that are critical to communication between cells in the immune system. The mechanism by which antigen associates with the Ir gene product to control immune responses is now a central focus of our research.

In performing functional assays of helper T cells in mice, we discovered that there are two helper T cell populations that act synergistically. Subsequent studies have shown that one of these is antigen-specific and recognizes antigen on B cells in association with self Ir gene products, but the second cell, while also specific for the foreign protein antigen, is specific for self immunoglobulin or antibody determinants. This cell does not develop in mice deprived of B cells experimentally, and we have therefore termed such cells immunoglobulin dependent helper T cells. It would appear that such cells play a critical role in the regulation of antibody quality, such as the type of antibody produced (e.g. allergic antibody versus neutralizing antibody). Thus, the helper T cell system can be divided into those that recognize Ir gene products and those that recognize immunoglobulins. Only the former also respond to non-self transplantation antigens encoded by the Ir genes.

By preparing cloned helper T cells, it has been possible to show that a single T cell can be specific for a foreign antigen recognized in the context of self Ir gene products as well as for non-self Ir gene products. This finding, which has been made in several systems, provides a potential explanation for the intensity of graft rejection reactions directed at antigens encoded in the major histocompatibility complex. T cells specific for any antigen would also be specific for some non-self transplantation antigen; thus, all antigenic contacts also immunize an animal against major histocompatibility complex encoded antigens of the species. Hence, an animal is immunized for graft rejection by encounter with conventional environmental antigens, presented to T cells on the surfaces of self cells.

In summary, our studies have shown that helper T cells are highly specific for foreign antigens. These antigens are recognized on self cell surfaces in the context of self major histocompatibility complex encoded antigens, and the same cell can also recognize non-self transplantation antigens encoded by allelic variants of these same polymorphic genes. There is a second set of helper T cells that do not recognize major histocompatibility complex encoded antigens at all, but rather recognize self antibody molecules. The precise chemical nature of the recognition process, and the relationship of these cells to regulatory T cells that in turn control the activity of helper T cells forms the focus of our current research effort.

Dr. Janeway is assistant professor of pathology
Immortalization of the Thymus Derived Lymphocyte

By Nancy H. Ruddle, Ph.D.

The body's defense against foreign invaders is accomplished in part by substances produced by many different kinds of cells. These substances include antibodies or immunoglobulins produced by members of the bone marrow derived lymphocyte (B cell) family and lymphokines produced by members of the thymus derived lymphocyte (T cell) clan.

B cells recognize foreign invaders called antigens, such as viruses and bacteria, by means of their surface antibody and the chemical nature of this class of molecules is well understood. The T cell's mechanism for recognizing antigen is much less clear, as is the biochemical nature of the factors they produce.

These problems have entertained and frustrated immunologists for many years and will probably continue to do so for some time to come. It is important to understand T cells intimately in order that we may direct them in their already well-known roles in defense against viral and fungal infections and against malignancy, through their direct killing of tumor cells and mobilization of other defense systems by means of factors called lymphokines.

One impediment to our understanding of T cells is the plethora of different subsets which can be categorized according to their functions. T cells can act as regulatory cells. They help B cells to differentiate into antibody secreting cells called plasma cells. Suppressor T cells inhibit the differentiation of B cells into plasma cells and inhibit effector functions of other T cells as well. Other T cells act as effector cells killing virus producing cells of manufacturing lymphokines which in most cases act on other "nonT" cells. These factors, to name a few, include migration inhibitory factors (MIF), immune interferon (IFN-Y), lymphotoxin (LT), macrophage activating factor (MAF), osteoclast activating factor (OAF), T cell growth factor (TCGF, also called interluken 2) and B cell growth factor (BCGF).

Because it is difficult to obtain enough T cells of one particular subset with the ability to recognize a particular antigen, a major goal of my laboratory has been to isolate individual T cells and then transform the normally non-dividing T cell into a continually proliferating line which can be grown and cloned in tissue culture. When this is accomplished, the progeny of an individual T cell representative of a particular subset can be isolated and studied providing basic information at the single cell level. Because T cells do not normally grow in culture for extended periods of time, we have to trick them so they grow, divide, and maintain their function in tissue culture.

One method we have used to prepare continual cell lines is to isolate T cells from antigen immunized mice and culture them in the presence of growth factors, specific antigen, and irradiated spleen cells from mice of the same strain. Spleen cells act as feeder cells and antigen presenting cells for the T cells. Many lines derived in this way do grow and divide in the presence of specific antigen and produce lymphotoxin (LT) and immune interferon (IFN-G). Some lines can be stimulated to produce factors at concentrations 500 times higher than those produced by cells immediately after removal from the animal. These cell lines are already providing quantities of lymphokines sufficient for biochemical analysis and use in biological experiments.

The marvelous technique of cell hybridization can also be used to immortalize T cells. The antigen specific T cell is taken from the animal and fused with a proliferating T cell tumor called a lymphoma. This fusion is accomplished by means of an agent such as sendai virus or polyethylene glycol, which perturbs the two cell membranes in such a way that holes are formed and repaired when the two cells stick together. Information from both parents is contributed to the resultant hybrid.

The tumor cell, with its capacity for unlimited growth, rescues the antigen specific properties of the T cell and provides the proper environment for that cell to flourish and proliferate. The result is a clone of hybrid cells with the antigen specificity and lymphokine producing capacity of the T cell and the unrestricted growth and replicative properties of a tumor. Even in the face of occasional instability, we have been able to detect expression of many functions in T cell hybrids which are characteristic of both individual parents. These include expression of particular surface antigens characteristic of T cells and traits typical of individual T cell subsets.

Thus, when we used as parents a T lymphoma and suppressor T cells enriched by their adherence to antigen coated plates, we have obtained hybrids which bind antigen when it is presented on a cell and produce suppressor factors. Other hybrids have been prepared from T cells or T cell lines (described above) which produce lymphokines. Many such hybrids express LT, and we are presently screening for one that expresses IFN-V.

The dissociation of LT and IFN in some hybrids suggests that they are separate molecules and demonstrates an important use for hybrids in allowing us to distinguish between molecules which can only be monitored by biological assays. We are also using hybrids to isolate individual cells which interact in complex immunological phenomena. The perpetuation of particular subsets which may make a profound contribution to a reaction, but which comprise only a very small segment of the population, is also affected through the preparation of T cell hybrids.

In recent experiments we have analyzed the nucleic acids of T cell hybrids and tumors and have made the startling observation that mouse T cells can excise fragments of DNA from a segment of chromosome 12 that
codes for immunoglobulin heavy chain. By analogy with information concerning the generation of diversity in B cells which produce antibodies, it appears that a similar mechanism is operative in T cells and may be involved in generating the specificity of the T cell antigen receptors. Now that cloned T cell lines and hybrids that produce lymphokines have been developed, it is possible to isolate messenger RNA and by recombinant DNA techniques, clone the genes for the lymphokines. This will permit the production of vast quantities of homogenous T cell products such as LT and IFN-Y which are of such profound immunotherapeutic potential in tumors and viral diseases, particularly in the compromised host.

Immunology at Yale has kept pace with recent developments in molecular biology and genetics. The tools of these disciplines are being applied to ever more clearly defined questions that have always plagued the immunologist. With these approaches, T cell immunology has emerged as a serious but still intriguing discipline. Students of T cells can move beyond phenomenology and descriptive studies and begin to understand mechanisms. By applying technical advances of molecular biology to cultures of cloned T cell populations, it is finally possible to study T cells at the most basic levels which ultimately elucidate the most complicated interactions at the level of the whole animal.

Immunology: An Approach to Health Problems of the Third World

By Frank F. Richards, M.D.

About 80 to 90 percent of the research into disease cure and prevention in the world is carried out in the United States. This research is largely directed against diseases such as cancer and cardiovascular disease which are serious threats to only about 10 or 20 percent of the world’s population; yet most of the population does not have the luxury of worrying much about the diseases of advancing years. The old enemies of poverty, malnutrition, infection and insect-borne diseases take their toll in youth and the middle years. In many parts of Africa, for instance, old age is revered because it is still a difficult and rare accomplishment.

Some of the most formidable diseases which face man in the tropics, and sometimes outside the tropics, are the parasitic diseases. Both animals and people can become infected and infested with a wide range of other animals which range from microscopic single-celled creatures such as amoeba or trypanosomes, to large many-celled creatures such as tape worms. In the West, we are used to making clear distinctions between animal and human diseases, but often in the third world, these distinctions are either blurred or lost. For instance, where protein malnutrition is the most important human disease, parasitic infections of domestic animals are in fact a serious cause of human sickness.

There is nothing new in the process whereby one animal makes its home within another for at least a portion of its life cycle. This arrangement has gone on since the dawn of life, and it was certainly well established before our primitive ancestors left the sea to crawl on land. It has to be recognized that while another animal’s body is a friendly environment, rich in food and protected from the elements, in another sense it is hostile, since most vertebrates have developed chemical and cellular systems of immunity designed to rid themselves of unwanted parasites.

To become established in a hostile world of antibodies and cells designed to engulf and kill invaders, the parasites have developed an audacious array of dirty tricks to fool the body’s defenses. Some may cover themselves in sheep’s clothing of host proteins, so that the body’s defenses cannot distinguish the parasite from its host. Others, such as trypanosomes, cover themselves in an easily recognized protein coat, but as soon as the body produces antibodies to that coat, the parasite changes coats and assumes one which is not recognized by the first antibody. In fact, a single trypanosome has been shown to produce more than 100 different coats.

Dr. Richards is professor of medicine
These parasites seem to have explored very thoroughly the working of the immune system in man as well as animals. They appear to have learned stratagems which can interfere in the complicated body cell interactions which constitute the immune system. It was shown in studies at Yale that an African trypanosome, a close relative of the organism that causes sleeping sickness, can turn on cells which suppress the body's immune responses.

The implications of such a discovery are profound, because on reflection, one can see the difficulties that such biological phenomena may have in the development of vaccine. In recent years, a number of antigens associated with parasites have been grown in tissue culture. Usually, not long after we learn to culture an organism we can prepare a vaccine by extracting harmless antigens from such material. However, if the parasite has learned to stimulate the immune system in such a way that immune responses are turned off rather than on, as in the case of trypanosomes, it is possible to give an extract of dead antigen to millions of people with good intentions of preventing parasitic disease, only to have the vaccine turn off their immune response, rather than turn it on. For this reason, it is extremely important that we understand how it is that organisms such as the trypanosome and the parasites that cause malaria are able to activate suppressor mechanisms that supply these parasites.

As the study of parasites develops, it becomes clear that their survival devices are based on some novel and interesting genetic and biochemical mechanisms. It is this flamboyant biology which continues to attract skilled young molecular biologists, immunologists and chemists. There is also the added attraction of the very real potential for making discoveries which can be applied directly to human welfare.

Immunology has a great deal to offer third world countries because of the nature of their problems. It is very important that we train physicians willing to look to these problems. Ninety million people in the world suffer from malaria, which causes untold suffering. Malaria, as well as protein malnutrition and parasitic diseases clearly are major factors in preventing the third world from entering modern society.

To this end Yale has begun to develop a Parasitology and Tropical Medicine Program which spans many departments in the School of Medicine. A clinical program is being designed to enable Yale physicians to be trained in Africa, Central America and in the Caribbean. In turn, the School will enable physicians working in the field to come here for further training and research. Further plans being discussed include a Ph.D. program in parasitology and the possibility of a Center for the Study of Parasitology and Tropical Medicine.

No longer can we isolate ourselves from the troubles of the world. We have learned that drug-resistant malaria acquired in the Far East is not uncommon among New Haven veterans who served in Vietnam. Refugee populations from Indochina have brought exotic diseases to regions where such diseases were never seen before. Many United States industries have operations in Africa, Indonesia, South America and increasingly, in jungles and inaccessible regions. These industries are faced with combating tropical diseases, yet few American physicians are trained in their management. Yale is learning to collaborate with industry in the solution of such problems and the community of interests created, may provide a real industry-academia bridge for the future.

All of the research on parasitology now under way in laboratories here or planned for the future, is based on the solid understanding of the immune response of the human body. It is now almost a hundred years since the science and art of immunology was born. We are beginning to apply it to some of the world's most urgent problems.
The woman at the front desk was conferring with a well-known scientist about illustrations for a book he is preparing. People came and went in steady procession to deliver or pick up projects. In an adjacent room, five technical artists worked diligently at their drafting boards, while in the darkroom beyond, a photographer processed prints for delivery later that day. An illustrator was putting finishing touches on a beautifully articulated anatomical drawing. The phones rang with frenetic insistence.

It was a typical morning in the Office of Medical Illustration. "Spring is our busiest time of the year, but in fact, it is always pretty hectic here," Virginia Simon, the director, acknowledged with a wan smile as she answered requests from a faculty member in need of a last minute illustration, conferred with her staff, and politely granted an interview, almost simultaneously.

She has been director of the Office for almost twenty years, and the activity of the place is a tribute to her skills not only as an illustrator, but as an administrator as well. "It was a one-person office in 1963, when I succeeded Armin Hemberger, a very fine artist who had been medical illustrator here for many years. But as the demand increased for the charts, graphs, drawings and photographs necessary to illustrate research being done in the School, the staff grew. There are three medical illustrators, three photographers and five technical illustrators, and several more on call for times such as this, when the workload is more than we can handle," she reported.

According to Arlene Resnick, who was the first person to join the staff, and is now senior administrative assistant, the Office serves more than 250 faculty, research staff and students, and produces an average of 500 to 600 projects each month. The variety of illustrative style and media is as impressive as the volume of work. Perfunctory charts and graphs, typical of textbook and lecture illustrations, are of course a part of the work, but the Office also produces fine four-color and black and white slides and prints as well as drawings of exquisite detail and artistic merit. The Office also designs and produces exhibits and posters. Orders range from a simple chart or graph to detailed anatomical drawings and photographs to illustrate an entire textbook.
Medical illustration and medical photography were originally handled in two separate offices, but after Howard Reynolds, the photographer retired, the work was gradually assumed by Virginia Simon's staff. In fact, photography has become an important factor in the production of much of the work that comes from the office, and photographers on the staff frequently work closely with the artists and illustrators on projects.

As medical illustrators from Vesalius down through history have recognized, nowhere is the old proverb, "a picture is worth a thousand words", more true than it is in medicine. Description of a complex new research finding or an intricate surgical procedure would be almost impossible without some kind of graphic assistance. In addition to traditional methods of illustration, modern technology has made possible a fantastic array of techniques to capture on film or paper tiny organisms or remote and hitherto inaccessible sections of anatomy.

With these sophisticated methods for precise replication available, isn't the age-old art of medical illustration passe?" Not at all," Mrs. Simon replied. "There are many instances when a drawing is preferable. For instance, in
Photograph of a pteridium rhizome, enlarged many times, was made by Thomas Coughlan.

describing a surgical procedure, a camera might capture too much detail. The artist, on the other hand, can ‘peel away’ unnecessary elements and concentrate only on the most significant parts, so that the drawing is much easier to read than a photograph would be,” she replied.

There is more to medical illustration than merely artistic ability. “It requires as much knowledge of anatomy to be a good medical illustrator as it does to be a medical anatomist who is also a doctor. It also requires very particular kinds of drawing skills and great precision,” Mrs. Simon explained. In addition to constant reference to anatomical texts, the medical illustrators on the staff sometimes find themselves in the operating room alongside surgeons, nurses and anesthesiologists, watching the procedure closely, and taking many rolls of film for reference. Recently two members of the staff took turns recording step by step a very delicate surgical procedure which took almost twenty hours.

Some members of the faculty are more experienced than others in their knowledge of graphic representation and know precisely what methods will reflect best the content of their work. Usually these same people have very real

Photograph of functional neck dissection performed by Dr. Clarence Sasaki by Randall A. Smith.

Drawing by Wendelyn Hill of superior venacava common pulmonary artery shunts, executed for Dr. William Glenn.
Virginia Simon

Schematic rendering by Virginia Simon of seven vertebrate nephrons drawn to a single scale adapted from references to illustrate an article by S. Long and G. Giebisch, which appeared in the Yale Journal of Biology and Medicine.

A former student of the Art Students League in New York, Virginia Simon started her career as a painter and an architectural and technical draftsperson. She first worked as a medical illustrator for Yale on a free-lance basis from her home in Rhode Island. One of her most frequent clients then was the late Dr. Nicholas Giarman, professor of pharmacology.

When Armin Hemberger announced his intention to retire in 1962, she applied for the job and was accepted. The question then, she said with a laugh, was, “is there enough work to keep her busy full time?” In no time at all she was indeed very busy. “I was so excited about the job — I still am.”

esthetic judgement, and as a result, are a real pleasure to work with, according to Mrs. Simon. “Others bring in work without realizing the problems of translating their pen or pencil scratches into a finished product. We are frequently faced with the problem of presenting vast amounts of information in a very small space,” she said.

Still other members of the faculty and some students are “first timers”, and require considerable counsel and advice. “Actually, this may be my favorite part of this job. I really enjoy sharing the experience we have gained in this office with them. The exchange of knowledge between the client and members of the staff about presenting scientific information has been one of the most rewarding aspects of working here,” Mrs. Simon said.
OGCE at Yale

"This is a superior program. The School's support for continuing medical education, the productive relationship between clinical departments and the Continuing Medical Education Office, the substantial formalized on-going community hospital interaction, all lead to the expectation of continued growth in providing superior educational activities." These words of praise were included in a letter from the Accreditation Council for Continuing Medical Education, announcing that the School of Medicine's program for continuing education had received accreditation for a new term of six years. A standard interval of accreditation is four years; one of six years is given only to exceptionally stable and meritorious programs, according to the Council.

Established in 1975, the Office of Graduate and Continuing Education extended programs of the School's former Office of Regional Activities. They were based on the federal Regional Medical Programs legislation (PL 89-239) of 1966, which expired in the mid-70's. It expressed Congressional concern about the translation of federally funded basic medical research to the improvement of patient care in the community, and provided funds to accomplish this goal.

Dr. James D. Kenney was appointed associate dean for graduate and continuing education in the fall of 1978. There hasn't been a dull moment in the Office since. In spite of a busy private practice in rheumatology and internal medicine in New Haven, Dr. Kenney's interest in continuing medical education runs deep. On being appointed associate dean, he literally rolled up his sleeves and began applying his incredible energy and creativity to its operation.

"When the regional medical program began, I was a devout practicing private physician who had an interest in Yale's relationship to the private medical community," he explained. "As such, I was invited to sit on some of the committees involved in setting up the regional activities program here." As time went on, he also helped to develop the four Professional Standards Review Organizations in Connecticut, and for about ten years, he has headed the Internal Medicine Review Course.

"I had one foot in the region and one foot in continuing education, and I had watched the OGCE grow from its early days as an Office for Regional Activities through the development of an associate deanship for graduate and continuing education. I was very interested in becoming a part of it."

Under the federal regional medical legislation, the Connecticut Regional Medical Program established a system of affiliation of community hospitals either with the Yale School of Medicine or the University of Connecticut School of Medicine. Yale already had longstanding relationships with several community hospitals.

With the new regional medical program, these ties were formalized, coordinated and gradually expanded.

A major undertaking since Dr. Kenney's appointment has been the review and renegotiation of five-year agreements with each of the regional hospitals in Yale's program. (Hospital of St. Raphael in New Haven; Bridgeport and St. Vincent's Hospital; Danbury Hospital; Greenwich Hospital; Griffin Hospital in Derby; Lawrence and Memorial Hospitals in New London; Norwalk Hospital; and St. Mary's and Waterbury Hospitals). The general objectives of the affiliations include continuing education of medical staff, graduate medical education of house staff, undergraduate medical education, recruitment of faculty and medical staff, and multi-hospital research programs and referral networks.

After moving cautiously at first, the Yale affiliated hospitals program is proving attractive to all parties. "The chiefs of services and others in the hospitals who interact with our faculty have become increasingly prudent planners, so that the teaching provided by Yale to the regional hospitals is not simply a matter of talking heads, but instead, includes bedside rounds, special conferences, grand rounds, clinic review — whatever the chief at the hospital feels will be best for a program that is underway there," according to Dr. Kenney.

The OGCE staff has given a great deal of attention to the organization and standardization of the mass of information involved in the agreements with each individual hospital, in an effort to facilitate access and review by outside agencies such as the Accreditation Council for Continuing Medical Education. In addition, they keep a census of continuing medical education events in the various hospitals. "This is essential," Dr. Kenney pointed out, "so that Yale, as an institution, does not appear to be a landlord who signs an agreement, and as he leaves says, 'Call me if anything interesting happens.' We specifically solicit and keep records of most, if not all, of the CME programs that take place in each hospital."

One of the most innovative programs Dr. Kenney has brought to the office provides physicians the opportunity to acquire 26 Category 1 CME credits a year without ever leaving home. It consists of objective open-book examinations given twice a year, based on the contents of THE MEDICAL LETTER in the preceding six months. THE MEDICAL LETTER, published by a non-profit organization, is a widely circulated and well-known source of information about drugs and therapeutics.

Developed in the latter part of 1979, the examination program took off like a rocket, and there are now about 10,000 subscribers. "Extremely valuable. Researching the answers constitutes a most valuable review." "It is excellent. Taking the exam compels me to study THE MEDICAL LETTER. This improves my expertise in 'medicine' which helps me as an orthopedic surgeon and professor." "It's the most attractive of the good quality CME correspondent courses in terms of cost per CME credit unit." "Excellent. Would like to see more like it. Every physician should participate." have been some of
The OGCE Staff

Janice Gore, front row center, is assistant to the associate dean for graduate and continuing education. According to Dr. Kenney, she manages the Office, doing everything from balancing the budget to making arrangements for the many conferences sponsored by the Office, and administering the postdoctoral fellow program — and she does it with easy grace.

Helen Kosack, front row right, is the Office secretary. In addition, she does all of the administrative work involved in the production of THE MEDICAL LETTER EXAM, including the test scoring, analysis, reporting of results, and awarding of certificates. "An absolute marvel with detail, she is the perfect person for the job," Dr. Kenney said.

Patricia Soderberg, front row left, is the liaison between the Office and the affiliated hospitals, arranging for lecturers and the like.

Mary Ellen Levy, in the back row with Dr. Kenney, produces the Medical Center Weekly Schedule of Events, one of the Office’s many subsidiary projects.

Dr. Kenney, a professor of clinical medicine, has been the associate dean for graduate and continuing education since 1978. "One of the unique privileges of practicing medicine at Yale-New Haven Hospital is to be part of the most unusual organization here, in which we have people of basic scientific expertise, people who are straightforward practitioners, and all shades in between. There are lots of vigorous minds and an extraordinarily good house staff. It’s a nice vigorous climate in which to work."

In response to a question of whether a medical school was the proper agent for graduate and continuing education, Dr. Kenney left little doubt about his feelings about the subject. "To provide continuing medical education is, as I see it, a proper endeavor of the university. Whether or not there are laws mandating CME, and whether or not there might be a conflict, either for legal reasons or psycho-social reasons with state medical societies, it is still the proper business of the university."

This philosophy is evident in the direction of activities the OGCE has taken over the past few years. "My own instincts are those of a practicing physician with some minor scholarly pretensions. I am not an educator or an educationist. I lament the entry into this field of those educationists who are long on the quantification of what there is to be learned, or how much time it takes to learn it, or how great was one’s satisfaction with what had been learned and how that was expressed in one’s life. I don’t think the business of becoming cultured in any way — whether in medicine, the arts, or hard science — is properly dealt with that way," he explained. "After all, the population of people with whom we deal is bright, and the approach to measuring what has been achieved by them has to be more general."

For that reason, he sees the Office of Graduate and Continuing Education as a mediator between the people who make demands for quantitative reportage on the one hand, and the people in the School of Medicine, who are of professional merit. "Our job is to interpret and make easy a transference between the vigorous, difficult-to-define life of a university, and the bureaucratic mind, which seeks principally a report of what was done. We stand between, trying to make things satisfactory for the critic, and easily presented by the person of skill."
A View From The Other Side of the Retractor

I read with interest the article entitled “Science in Medical Practice” which appeared in the last issue of Yale Medicine. Who could disagree that an important part of undergraduate medical education should be the teaching and development of critical thinking? What intellectual skill more surely defines the excellence of both investigator and clinician than the ability to critically evaluate new information? However, isn’t our mission as medical educators broader than this? We are here not only to nurture inquiring minds; we are here also to train the next generation of health care professionals — men and women who will be responsible for the lives of the infirm and insecure. Where in the curriculum are we to breed and evaluate the integrity and empathy that will insure against abuse of this responsibility — and the humility and humor to carry this responsibility gracefully? Where in the curriculum are we to assess the students’ ability to respond to stress with equanimity and effectiveness? Where and how are we to teach these students about priorities and decision-making? Where are we to evaluate how maturely and sensitively they are able to work with others? Where are we to teach and assess their ability to take initiative when it is indicated — and to ask for help when it is needed? My guess is that most of these qualities are fostered and refined during those “wasteful clinical years of medical school” to which the article referred. And unless this interface with the clinical faculty remains good and meaningful we will have abdicated one of our most important academic roles: career development and counseling. This is not “parochialism”; it is helping future physicians decide what to do with their lives.

I believe that a relevant, integrated medical school curriculum requires an environment which values inquiry and emphasizes the need to utilize basic science instincts and insights in approaching and solving clinical problems. We are teaching students who have come to a professional school, not a graduate school. We are here to provide guidance in approaching both problems and patients — and to help our students acquire the skills and stimulation necessary for continuing self-education. Our role, it seems to me, is to clarify the relevance of the basic sciences to the clinical sciences, to require the same intellectual rigor in both, and to expect that these intellectual skills be balanced by maturity and compassion.

I believe that there are some specific ways in which surgery (as compared to other clinical disciplines) is particularly relevant to the development of these problem-solving skills, whether or not the student has any interest in surgery as a career: surgical problems tend to be better-defined (with a clear-cut beginning and end) and usually evolve over a shorter time-line; decision-making and intervention are central to altering the course of these problems (and intervention decisions cannot be made without a consideration of priorities); the consequence of the intervention is usually clear (as is the feedback as to its effectiveness). Clinical problem-solving implies both an evaluation of the problem and a plan for treatment. Surgical problems not only require an early decisive assessment but also are more likely to result in a clear and tangible solution. The surgeon who is called to see a patient who is septic with an acute abdomen or hypotensive following an automobile accident or exsanguinating from a gastric hemorrhage must be calm, compassionate, thorough, and decisive. The student who is there in the operating room when the perforated colon is resected, the lacerated liver is repaired, or the bleeding ulcer is oversewn, is seeing the impact of anatomy, pathology, and physiology on the solution of a clinical problem. The student who participates in this process is learning about problem-solving skills that are fundamental to his future.

This is a case not for “departmental parochialism” but for medical education.

Richard J. Gusberg, M.D., Assistant Professor of Surgery, Director of Medical Students, Department of Surgery

This letter from Dr. Gusberg is the only correspondence received by Yale Medicine in response to the article “Science in Medical Practice”; however, Dr. Berliner has received several personal letters from alumni, all but one of which enthusiastically supported his views on curriculum as expressed in that article. Editor.

Erratum:

An error in Dean Berliner’s article “Science in Medical Practice” published in the Winter 1982 issue has come to our attention.

In the first column on page 3, the word “not” was erroneously included in the next to last line. The sentence should read: “Many of the things that now seem to our students to be most relevant, in which they most eagerly involve themselves, will be out of date, discarded”.

We apologize for this error.
**Two on Faculty Elected to National Academy of Sciences**

Two members of the faculty have been elected to the National Academy of Sciences. Dr. Charles F. Stevens, professor of physiology, has been elected a member; and Dr. Tsuneo Tomita, senior research scientist and professor emeritus of ophthalmology and visual sciences, has been elected a foreign associate of the Academy. Election to the National Academy of Sciences is considered one of the highest honors that can be accorded to a scientist or engineer in this country.

Dr. Stevens is well known for his research on the molecular basis for nervous system function, and in particular, for his studies on the role of proteins in transmission of information between nerve endings and the nerve impulse. A graduate of Harvard University, he received an M.D. degree from Yale in 1960 and a Ph.D. degree from Rockefeller University in 1964. Prior to his appointment to the Yale medical faculty in 1975, Dr. Stevens had been professor of physiology and biophysics at the University of Washington School of Medicine in Seattle, where he had been a member of the faculty since 1963. In 1969-1970, he was guest investigator at Lorentz Institute for Theoretical Physics, Leiden University, The Netherlands. He received the W. Alden Spencer Award from Columbia University College of Physicians and Surgeons in 1979, and was the Grass Lecturer for the Society of Neuroscience in 1981.

Dr. Tomita made a major contribution to the understanding of the visual process when he first described the electrical signals produced in the photoreceptor cells of the eye. Further, with his colleagues, he has been able to describe the way in which the nerve cells of the retina process these photoreceptor signals. Formerly professor of physiology and dean of the Keio University School of Medicine, he has been associated with the Department of Ophthalmology and Visual Sciences at Yale since 1971. He received both an M.D. degree and a Ph.D. degree from Keio University, where he was a member of the faculty for thirty-five years. Dr. Tomita is the recipient of a number of honors including the Purple Ribbon Medal of the Japanese government, the Proctor Award of the Association for Research in Vision and Ophthalmology, and the Japan Academy Award.

**Two Professors Retire**

Two distinguished professors at the School of Medicine will retire at the end of this academic year.

Dr. Dorothy M. Horstmann, John Rodman Paul Professor of Epidemiology and Professor of Pediatrics, and a member of the faculty for 39 years, is recognized throughout the world for her research on poliomyelitis and rubella. She received her B.A. and M.D. degrees from the University of California at Berkeley, and first came to Yale as an instructor in preventive medicine in 1942. In 1969, she became the first woman ever to hold an endowed chair at Yale, when she was promoted to the Paul professorship. She is a member of American Academy of Sciences, and a Fellow of the American College of Physicians.

Dr. Joseph S. Fruton, Eugene S. Higgins Professor of Biochemistry and Professor of the History of Medicine, is one of the nation’s leading scientists in the field of the biochemistry of proteins. He received a B.A. degree and Ph.D. degree from Columbia University, and after ten years on the staff of The Rockefeller Institute for Medical Research, came to Yale in 1945 as an associate professor.
Pharmaceutical Firm Establishes Visiting Professorship in Pharmacology

The School of Medicine has received a grant of $50,000 from Sterling Drug Incorporated to establish a Sterling Drug Visiting Professorship in the Department of Pharmacology. The grant was made in honor of Dr. Alfred Gilman, a distinguished research scientist and educator in the field of pharmacology.

The Sterling Drug Visiting Professorship is intended to promote the interchange of knowledge in pharmacology between colleges and universities. Visiting professors will deliver a major lecture to faculty and students, in addition to participating in seminars and workshops.

Dr. Gilman, who has been a lecturer in pharmacology at Yale since 1973, is co-author with Dr. Louis S. Goodman of "Pharmacological Basis of Therapeutics". The book, published by MacMillan & Company and now in its 8th edition, is considered one of the most important texts in the field of pharmacology.

Before coming to Yale, Dr. Goodman had been professor and chairman of the Department of Pharmacology at Albert Einstein College of Medicine since 1956. He is a graduate of Yale College and received his Ph.D. degree in biochemistry here as well. In addition to being elected to membership of the National Academy of Sciences, he is a fellow of both the American Association of Arts and Sciences and the American Association for the Advancement of Science, and a member of a number of other professional societies. In 1979, he received an honorary Doctor of Science degree from Dartmouth College.

The endowment to establish the Sterling Drug Visiting Professorship in honor of Dr. Gilman was presented to Dr. Alan C. Sartorelli, professor and chairman of the Department of Pharmacology, by Dr. W. Clarke Wescoe, chairman of the board and chief executive officer, and Dr. Monroe E. Trout, senior vice-president for medical and scientific affairs of Sterling Drug Inc., in a brief ceremony on March 24.

Leading Geneticist was Fifth Caldwell B. Esselstyn Fellow

Dr. Charles R. Scriver, one of Canada's most distinguished medical geneticists and educators, delivered the Caldwell B. Esselstyn Lecture on Monday, April 26, at the Yale School of Medicine. The title of his lecture was "Genetics and Medicine: an Evolving Relationship." Named the Fifth Caldwell B. Esselstyn Fellow of the Department of Epidemiology and Public Health, Dr. Scriver also held informal meetings and participated in seminars with faculty and students.

Dr. Scriver is generally recognized for his research on the role of amino acids and phosphate transport in inborn errors of metabolism. He is a professor of medicine, biology, and human genetics at McGill University, Montreal, where he received a B.A. degree, cum laude, in 1951 and an M.D.C.M. degree, cum laude, in 1955. A Fellow of the Royal College of Physicians and Surgeons (Canada), as well as of the Royal Society of Canada and the Canadian College of Medical Geneticists, he is the recipient of numerous honors and awards including the Queen's Jubilee Medal (1977), the Gairdner International Award (1979), and the McLaughlin Medal of the Royal Society of Canada (1981).

The Caldwell B. Esselstyn Fellowship was established by the Esselstyn Foundation in 1978 in honor of the late Dr. Esselstyn, Class of 1925, to bring to the Yale community the opportunity for dialogue on social and ethical issues as they affect health and the quality of life. Fellows are selected from among those whose work has influenced present public debate on health care policies, whether or not they are directly concerned with the delivery of health care services.

AWARDS 1982

The Francis Gilman Blake Award is presented annually by the graduating medical school class to the outstanding teacher of the medical sciences. The award this year was presented to Dr. Edwin C. Cadman, associate professor of medicine and pharmacology.

Dr. Caroline Ryan, an intern in medicine, and Dr. David Podell, a second-year resident in medicine, received the Samuel D. Kushlan Awards. Established in 1969, the awards recognize the intern and second-year resident who have contributed the most to patient care during rotation through the Memorial Unit Medical Service. Selection of recipients is made in consultation with the clinical faculty and the nursing service.

The Benedict R. Harris Award, established in 1967, was presented to Dr. Samuel D. Kushlan, clinical professor of medicine and associate chief of medicine at the Yale-New Haven Hospital. The award is made annually to the private physician who has contributed the most to the teaching of the house staff. Selection is made by first-year assistant residents.

The Betsy Winters House Staff Award is presented annually to the member of the house staff of the Yale-New Haven Hospital who made the most significant contribution toward the education of medical students. The selection is made by the senior class, who this year presented the award to Dr. David Braun, resident in pediatrics.
"THE MOVE" into New Patient
Care Facility: fanfare, flowers and festivity

The first patients moved into the Yale-New Haven Hospital’s new seven-story patient-care facility on April 21, culminating nearly 20 years of planning and three years of construction. The enormous task of moving patients, staff and equipment from the outdated New Haven Unit and parts of the Memorial Unit was launched amid balloons, flowers and a spirit of festivity in the pristine, attractive new facility.

Each patient moved received a commemorative coffee mug marking the occasion, and every patient in the Hospital was given a red carnation as a token of the event. Patient moves are expected to be completed by June 10. "This is an exciting, landmark day in the history of Yale-New Haven Hospital," noted President C. Thomas Smith, who presided over a brief ceremony before the first bed was wheeled onto the fifth floor. "It marks a major advance in our ability to deliver the best possible patient care."

The $73 million project replaces outdated facilities located across the street in the New Haven Unit with a modern, comfortable and integrated patient care area. The project also includes renovation of the childbirth facilities in the Memorial Unit.

The building has enabled the Hospital to consolidate the departments of radiology, pediatrics, the operating rooms, admitting and discharge offices and the cafeterias. The new emergency room located on the first floor has doubled in size. Patient rooms on floors five through seven have been designed with privacy and comfort in mind.

Fulton Award Presented to
Jed Gorlin

Jed Gorlin, a fourth-year medical student, was awarded the John F. Fulton Memorial Award in the History of Medicine. The award was established in 1966 by a group of Dr. Fulton’s former students and alumni of the Nathan Smith Club, an organization of students interested in medical history. The award, which perpetuates Dr. Fulton’s work of fostering student interest and enjoyment in research in medical history, is given annually to the student who submits the best manuscript of a talk presented before the Nathan Smith Club.

Mr. Gorlin’s paper entitled “The Doctrine of Difficult Dentition” is based upon his study of medical concepts concerning teething in childhood.

Faculty Notes

At a ceremony on May 20, the University of Wisconsin Medical Alumni Association presented Dr. Leon Rosenberg with the Distinguished Alumni Citation Award, the highest award conferred by the Association. In February, Dr. Rosenberg, who is professor of human genetics and pediatrics, and chairman of the Department of Human Genetics, was the UCLA Annual Lecturer, and in April, he was Pfizer Lecturer at the University of Minnesota.

The National Board of Medical Examiners has appointed Dr. Philip Felig, professor of medicine, as chairman of the National Board’s Part II Medicine Test Committee. The distinguished corps of examiners of the Board, which includes individuals selected from among the most prominent members of medical faculties throughout the United States and Canada, has the responsibility for the development of National Board examinations and for assuring the quality and integrity of the overall evaluation system of the National Board of Medical Examiners.

Dr. Donald Cohen, professor of pediatrics and psychiatry in the Child Study Center, has been elected a member of the Board of Trustees of Brandeis University.

The John Simon Guggenheim Memorial Foundation has awarded fellowships to two members of the faculty. Dr. Arthur Brooadus, associate professor of medicine, received the award for his work on isolation of the factor responsible for the hypercalcemia of malignancy; and Dr. Frederick Naftolin, professor and chairman of the Department of Obstetrics and Gynecology, was recognized for his research on the structure-function relationship in neuroendocrinology. They were among 277 scholars, scientists and artists chosen from 3,200 applicants in the Foundation’s 58th annual competition.

Dr. William H. Prusoff received the 1982 ASPET Award from the American Society for Pharmacology and Experimental Therapeutics. Dr. Prusoff, who is professor of pharmacology, is recognized for his work in the development of nucleotide analogs as potential antiviral and anticancer agents.

Two members of the faculty were recently honored by the American College of Physicians. Dr. Howard Spiro, professor of medicine and well-known gastroenterologist, has been made a Master of ACP. The Richard and Hinda Rosenthal Foundation Award "to that scientist or scientific group whose recent innovative work is making a notable contribution to improve clinical care in the field of internal medicine" was presented to Dr. Alvan R. Feinstein, professor of medicine, and epidemiology.

In addition to being elected president of the American Association of Pathologists, Dr. Vincent Marchesi has also been named editor-in-chief of the American Journal of Pathology, the official publication of the Association. Dr. Marchesi is Anthony N. Brady Professor and chairman of the Department of Pathology.

The Greater New Haven Chapter of the University of Connecticut Alumni Association honored Dr. Robert B. Hurowitz with its Distinguished Alumni Award at the Association’s annual award reception in June. Dr. Hurowitz is assistant clinical professor of pediatrics.
Dr. Mary Swigar, associate professor of psychiatry, has been named "Distinguished Alumnus" by Muhlenberg College, in Allentown, Pennsylvania. She is one of four women ever to receive this award, which is given annually by the college.

Dr. Ira V. Hiscock, Anna M.R. Lauder Professor Emeritus of Public Health, celebrated his 90th birthday on May 7. Among greetings he received was this telegram from Hector Acuna ('51 MPH), director of the Pan-American Health Organization: "Please receive my heartiest congratulations on the occasion of your ninetieth birthday. As a former student of yours, I would like to express once more my deep affection not only for your thoughtful lectures, but especially for your warm and wise guidance that you have provided to myself and hundreds of others to better serve the cause of public health. On behalf of the Pan American Organization Regional Office for the Americas of the World Health Organization and myself, we feel pleased to honor you in this way." Dr. Hiscock resides at the Pine Run Community in Doylestown, Pennsylvania.

Richard Schweiker, Secretary of Health and Human Services has invited Dr. Adrian Ostfeld to join the National Advisory Council on Aging. The council is the senior advisory group on aging research and training in the National Institutes of Health. Dr. Ostfeld is Anna M.R. Lauder Professor of Epidemiology and Public Health.

Dr. Gary Schwartz, professor of psychology and psychiatry, has been busy on the lecture circuit this spring. On March 2, he delivered the second annual Kate Ellen Polacheck Memorial Lecture on Behavioral Medicine at the University of Wisconsin Medical School; and the next day he gave an invited workshop on research in psychophysiology at a meeting of the Society of Behavioral Medicine. He recently gave an invited series of lectures at the Skinner Institute on Biofeedback and Behavioral Medicine in Rome.

The 22nd Annual Herman Beerman Award was presented to Dr. Frank Ruddle, professor of biology and human genetics, by the Society for Investigative Dermatology. The award is presented to a scientist outside the specialty of dermatology for significant contributions in developing a new biomedical technology with applications in dermatology. Dr. Ruddle delivered the Beerman Lecture entitled "Reverse Genetics: A New Approach to Human Genetic Analysis."

On March 31, Dr. Bernard Gee, professor of medicine, gave the Dr. Owen Clarke Memorial Lecture at the University of Western Ontario, London, Ontario, with the title of "Sarcoidosis: Current Concepts in Pathogenesis, Diagnosis and Management." Dr. Gee was also an organizer and director of the International Conference on Occupational Lung Disease sponsored by the American College of Chest Physicians and held in Chicago in March.

Dr. Frederic L. Holmes has been appointed Master of Jonathan Edwards College for a five year term. Dr. Holmes is professor of the history of medicine.

New Book by Faculty

"Narcotic Analgesics in Anesthesiology". Edited by L.M. Kitahata, professor and chairman of the Department of Anesthesiology and J.G. Collins, assistant professor of anesthesiology and pharmacology. Williams & Williams (Baltimore) 1982.

Dr. David A. Balla, associate professor of psychology in the Child Study Center, died on February 16, 1982 at the age of 42.

A native of Pittsburgh, Pennsylvania, Dr. Balla received his B.A. degree from DePauw University in 1961 and the M.S. and Ph.D. degrees in Psychology from Yale University in 1965 and 1966. He was appointed a Research Staff Psychologist in the Yale Department of Psychology in 1967 and in 1970 was promoted to Research Associate in the Department of Psychology and the Child Study Center. In 1977 he was appointed to the rank of Associate Professor in the Child Study Center.

Dr. Balla made major contributions in the fields of developmental psychology, mental retardation, and juvenile delinquency. He was an associate editor for Applied Research in Mental Retardation and a consulting editor for the American Journal of Mental Deficiency and Clinical Psychology Today. Dr. Balla was also the author of more than 60 scientific publications including both journal articles and books.

In addition to his wife and parents, he is survived by three daughters, a son, and a brother. S.S.S.
Special Lectures

The following endowed lectures were given at the School of Medicine during the academic year 1981–1982:

**The Paul B. Beeson Memorial Lecture**

**Sanfurd G. Bluestein Lecture**
Dr. H. Paul Capp, *University of Arizona College of Medicine*, "Medical Imaging—1990." — February 11.

**Phyllis T. Bodel Memorial Lecture**

**Philip K. Bondy Lecture**

**The Jack R. Cooper Lecture**

**Clyde L. Deming Memorial Lecture**
Dr. Vincent O’Connor, Jr., *Northwestern Memorial Hospital*, "Experience with Vesicovaginal Fistula Repair." — November 30.

**Caldwell B. Esselstyn Lecture**

**Harold Fink Memorial Lecture**
Dr. Ernest Beutler, *Scripps Clinic and Research Foundation*, "Bone Marrow Transplantation in the Therapy of Acute Leukemia." — May 12.

**John P. Flynn Memorial Lecture**

**John F. Fulton Memorial Lecture**
"Some Aspects of the History of Therapeutics" — October 29.
"Early Ambulation — A Case Study in the History of Surgery." — October 30.

**Samuel Clark Harvey Lecture Series**
Dr. Franklin C. Wagner, "Spinal Cord Injury from Imhotep to Present." — February 15.

**William Barriss McAllister Jr. Memorial Lecture**
Dr. Steven Silverburg, *George Washington University Medical Center*, "Hormones and Endometrial Cancer." — March 24.

**John Meyer Visiting Professor Lecture**

**Louis H. Nahum Memorial Lecture**

**Leon E. Sample Lecture**

**Henry E. Sigerist Lecture**

**Arnold D. Welch Lecture**
Dr. Frank M. Huennekens, *Scripps Clinic Foundation*, "Three Roads to Tetrahydrofolate — Implications for Chemotherapy." — April 16.

**Dr. Samuel and Kathryn Yochelson Lecture**
alumni news

The Alumni in Medicine Column

Introduction by Nicholas P. R. Spinelli, President

Among many alumni, working for the School with constancy but quietly and with low profile, has been Ros Gallagher ('30 Med). He has been Chairman of our Medical School Bequest and Endowment Program since its inception in 1960. In these times when private educational institutions are experiencing financial hardship, remembering our alma mater among our heirs, in some fashion, has become a more urgent necessity. This effort has been most successful in the Yale College Alumni Fund as well as other Yale graduate schools, most conspicuously the Law School. In recent years, Ros has been ably assisted by Sam Kushlan ('35 Med) in this task. Following is their description of what B and E are all about.

Why a Gift to "Endowment"?

"... Kissing your hand may make you feel very good but a diamond ... lasts forever." So, too, does a gift to the Yale Medical School Alumni Fund Endowment. "Endowment" to many of us spells permanence, "a gift in perpetuity", "a gift that keeps on giving" — those are what a gift to "Endowment" is all about.

It is the permanence of a gift to Endowment that appeals to so many of those whose circumstances permit them to consider making a substantial gift. Unlike the Parisian's kiss, it is not for the moment. Year after year after year the income it generates will help to maintain the School's quality.

The "giving" also has permanence. Like "The Brook" of Alfred Lord Tennyson, it will "go on forever". The total amount of a donor's gift to Endowment is credited in his or her name and class in the year it is received and its income will be similarly credited each year thereafter. It is impossible to know how much this way of recognizing a donor's gift to Endowment may influence the donor's decision to make a contribution. But is it not true that there is more than a little of "... this pleasing hope, this fond desire, this other donors like the variety of ways a major gift can be made to Endowment. For one, a Life Income gift best fits his or her circumstances; for another a Deferred Annuity gift, a Bequest, a Capital gift or a gift of a Life Insurance policy whose protection is no longer required will be appealing and appropriate.

The fact that the gift's capital is managed so as to compensate for attrition by inflation must impress every prospective donor; no one likes the thought that a gift's real value will gradually (these days rapidly) diminish. To counteract this the Fund adds a fraction of each year's income to the capital amount of the original gift.

These brief speculations of why alumni and alumni choose to make gifts to Endowment suggest another fundamental question: why does a graduate desire to make a substantial gift? Like many basic ones — there is no single, definitive answer.

"You, no doubt, have thought of more than one reason. There are many: "divers dive for diverse reasons" — and so do people who give. Some of the reasons are homely, familiar; others, equally valid, may be obscure. It's a wise donor who knows his own motives.

Warm feelings, fostered by happy memories of his or her own School experiences, or of one or more teacher's encouragement, inspiration or friendliness, must be high on everyone's list of reasons. An uncomplicated, simple feeling of obligation to repay the School for at least the difference between the tuition paid and the amount his or her education cost the School is another. Or a mix of empathy with succeeding generations of students and the memory of one's own struggle may serve to breed a desire to make these younger people's journey as beneficial as — and less grueling than — the donor's.

Then there are the complex, more intimate reasons: the need further to feed a still hungry ego, or to bolster a still less than solid identity. Not all the processes of adolescence reach their destinations before the thirties!

And, often intertwined with one or more of those, is a reason that might better have been mentioned first; the fact that many donors previously had learned that giving is a rewarding experience, that it is "... more blessed to give than to receive", and frequently more satisfying.

Ros Gallagher, Chairman
Sam Kushlan, Co-Chairman
Yale Medical School
Bequest and Endowment Program

Class Notes

1932

Myron Wegman has been elected president of the American Association for World Health for the biennium 1982-83. From 1952 to 1961 Dr. Wegman served with the Pan American Health Organization, first as chief of the organization's Training and Education Division, later as secretary general. He was dean of the University of Michigan School of Public Health from 1961 until his retirement in 1974.

The AAWH is a private non-governmental health agency whose function it is to carry out programs of public education relating to the objectives and
programs of the World Health Organization and to encourage citizen support for WHO in the United States.

In addition, Dr. Wegman was the recipient of the first Distinguished Alumnus Award for Outstanding Service in Public Health from the Johns Hopkins University School of Hygiene and Public Health. The selection was based on a recent alumni survey in which 50 were nominated for the honor. Dr. Wegman received his master's degree in public health in 1938 from Johns Hopkins University.

1940

Secretary, Donald G. Johnson
Box 116
Bar Mills, Maine 04004

Dear Classmates,

It would be inaccurate to categorize my secretarial efforts as productive. In fact, I’ve had nothing about which to write since nothing has been brought to my attention. You will be pleased perhaps to learn that I do now have something to report, most of which is through Jim Ferguson.

Bill Oakes writes from Los Alamos, N.M. that he is now truly retired and has been travelling about the Southwest in his recently acquired trailer, visiting parks and thoroughly enjoying it.

Al Merendino has written to Jim Ferguson to say he has left the University of Washington and is now back in Riyadh, Saudi Arabia as director of the Cancer Therapy Institute and acting director of operations of King Faisal Medical City. Al’s “new career” sounds challenging. More power to him.

Mirable dictu! a letter to Jim dated last November from Joe Sokol. Joe’s career has taken him from medical school to training in medicine in New Haven before and after W.W. 2 with interim Army service in the Pacific. Then back to New Haven on the faculty at Yale, military service again 1950–52 in Europe, then back to New Haven. Joe went to Roswell Park in Buffalo in 1955 and became research professor of medicine at State University of New York. He left Buffalo in 1979 for Duke University and is a full professor “without responsibilities, less teaching,” but with time for research projects dealing with chronic myeloid leukemia. Joe is married to a native Floridian, and has two sons both of whom are M.D.’s; one of his sons is now in Upper Volta, Africa and the other, in Dallas after a residency there in medicine.

A letter also to Jim Ferguson from Crawford Campbell outlined plans for a six week lecture tour in March and April of this year to Japan, Thailand, South Africa, and finally to Rome where Kay will join him for three weeks in Florence. We are all glad to learn Kay has recovered from her Spring 1981 illness. Crawford and Kay’s younger son has decided to make a fantastic change from ballet to medicine. I wish him well in his new career.

Communication from Champ Taylor mentions a recent trip to France for a month last fall. His son, Reid, is in his third year of medical school and is interested in surgery.

Both Jim and I received letters from Jack Blaisdell. Jack went into orthopedics, and following discharge from the Army in 1947, he went into practice in Santa Ana, California where he remained until 1975. It appears Jack truly got involved in organized medicine through participation in numerous medical societies. He has received on two occasions the A.M.A.’s Physician Recognition Award in Continuing Medical Education. Having “tired of the rat race” in California, Jack and his wife, Fannie, moved to Northern Idaho, still practicing, but in a relaxed manner and in the pleasant surroundings of Lake Pend Oreille in Sandpoint, Idaho.

On Saturday, March 20, 1982 Jack Wells had a group of us 1940ers at his home in Wethersfield, Conn. Present were Eddie Martin and wife Marty; Eddie is still practicing in New Britain and believe me, he doesn’t look his age. Jim and Izzy Ferguson, now retired, are enjoying tennis and life in general. Jack and Eunie Wells are still up to their necks in civic activities. Jack’s current practice is limited by his own choice to former old patients. Ron and Betty Beckett, with whom I stayed for the week-end, were there. Ron is “retired” but still works in the Hartford Hospital in pediatrics and head of the Immunology and Allergy Division at the University of Connecticut.

Robert Hamburger, professor of pediatrics and head of the Immunology and Allergy Division at the University of California at San Diego, was elected in January to a three-year term as a member of the Board of Regents of the American College of Allergists.

1951

Robert Furman, vice president for corporate medical affairs at Eli Lilly and Company, has been named to the Board of Directors of the National Cancer Institute. Dr. Furman has served as professor and chairman of the Department of Medicine at the Indiana University School of Medicine since 1970. He is the author or co-author of more than 170 scientific papers in the fields of endocrine, cardiovascular and metabolic disorders and has served on the board of editors of several scientific publications in addition to being a member of numerous professional organizations. Dr. Furman is also a very active alumnus of Union College.

1956

Announcement was recently received that Captain William Narva, MC, USN, has been appointed by the President to the position of vice president of the Uniformed Services University of the Health Sciences, and that upon Senate confirmation. Since 1978, Dr. Narva has served as professor and acting chairman of the Department of Dermatology at the Uniformed Services University School of Medicine, a position which he will retain with his new assignment. Also since 1978, he has served as special assistant for reserve
affairs in the Bureau of Medicine and Surgery, and from 1970 Dr. Narva has been staff officer to the chief of Naval Operations.

1958
Robert Neuwirth has been named director of obstetrics and gynecology at St. Luke's—Roosevelt Hospital Center in New York City. His appointment marked the merger of Ob/Gyn patient care, teaching and research activities into a single department in the Hospital Center's three divisions: St. Luke's, Roosevelt and Woman's Hospitals. Dr. Neuwirth, noted for his research in non-surgical techniques for female sterilization, has coordinated numerous such projects internationally and has consulted on many in emerging and Third World nations. He pioneered the use of laparoscopy and is widely recognized as an authority on hysteroscopy.

1959
Mark Bitensky has resigned his professorship at Yale to join the Los Alamos National Laboratory in New Mexico, where he is Division Leader of the Life Sciences Division. He recently wrote to say that the demands of his new position are awesome. The functions of the division include toxicology testing of shale and other synfuels, mutagenicity and carcinogenicity testing, genetics and cytogenetics research, environmental science and waste management, flow cytometry, experimental pathology, and radiobiology.

1970
Daniel Dedrick is an assistant professor of anesthesia at The Pennsylvania State University College of Medicine at The Milton S. Hershey Medical Center in Hershey, Pennsylvania. His wife, Dr. Carolyn Dedrick, a former member of the class of 1973, has been named assistant professor of radiology at The Pennsylvania State University College of Medicine.

Bruce Reitz wrote recently that he is leaving Stanford University School of Medicine where he has been associate professor of cardiovascular surgery to become professor and head of the Division of Cardiac Surgery at Johns Hopkins University School of Medicine, a position which "has been held for the last 18 years by another Yale medical school graduate, Vincent Gott, ('53)."

1971
Steven Moffic has recently been promoted to associate professor of psychiatry at Baylor College of Medicine and has edited the book "A Clinician's Manual on Mental Health Care: A Multidisciplinary Approach", (Addison-Wesley, 1982).

1973
A letter received from Richard Boland in May 1981 was unfortunately omitted from the previous issue. He mentioned that he had "recently" run into several former classmates in the past few months, and upon comparing notes, it appears that a very large segment of our class has stayed on (at least this far) in academic medicine."

He notes that he is now assistant professor of medicine at the University of California, San Francisco, where he has been funded to study glycoprotein biochemistry in gastrointestinal cancer; that John Stratton is doing research in cardiology at the University of Washington where he was recently appointed assistant professor of medicine; and that Richard Young became assistant professor of pediatrics at Hershey Medical School (The Pennsylvania State University College of Medicine) a year ago and is doing research in pediatric neurology.

Dr. Boland listed twenty-four other classmates who, "as far as can be ascertained, currently hold academic appointments and are actively involved in research. This list (compiled from the softest of data bases — rumor and recollection) is in excess of one third of all those we could recall. It may be somewhat overinclusive, and some others may have been overlooked." He'd be interested in having corroborating information about this.

1974
Richard Pasternak, director of the Coronary Care Unit at Pacific Medical Center and clinical instructor in medicine at the University of California in San Francisco, has been elected to Fellowship in The American College of Cardiology.

House Staff

1946
The Houston Academy of Medicine-Texas Medical Center Library has honored John P. McGovern in naming the library's history of medicine collection for him. At a reception in April, a portrait of Dr. McGovern and a bronze plaque commemorating The John P. McGovern History of Medicine Collection were presented to the library.

1969
Michael Rosner wrote in April: "I was recently elected chief of medicine at Holyoke Hospital in Holyoke, Massachusetts. I continue in private practice in Holyoke with three other associates including Robert Seaver who was a Gastroenterology fellow ('71) at Yale."

IN MEMORIAM

Matthew Griswold
March 7, 1982
M. D. '25

Moses Cooperstock
January 30, 1982
M. D. '26

Richard M. Starr
(date unknown)
M. D. '26

Harold A. Flynn
January 30, 1982
M. D. '27

J. Merriman Lynch
February 20, 1982
M. D. '30

Dana L. Blanchard
December 29, 1981
M. D. '31

Frederick A. Wies
January 19, 1982
M. D. '33

Charles W. Cashman, Jr.
February 8, 1981
M. D. '41

Gabriel A. Saviano
December 15, 1981
M. D. '48

Allen R. Traurig
February 12, 1982
HS '66

Ronald M. Holloway,
M. D.
December 20, 1981
M. P. H. '67

23
Class of 1982
First-Year Postgraduate Appointments

Arizona
University of Arizona Affiliated Hospitals, Tucson
David Goldstein — Medicine

California
Cedars-Sinai Medical Center, Los Angeles
Albert Ungricht — Surgery
Kaiser Foundation, San Francisco
Eric Wells — Pediatrics
Stanford University Affiliated Hospitals, Stanford
Mary Vander Velde — Pediatrics
University of California Hospitals, San Francisco
Cathleen Belden — Obstetrics & Gynecology
Gabriel Escobar — Pediatrics
Howard Jaffe — Medicine
Kathleen Nolan — Pediatrics
University of California/Irvine, Irvine
Louise Connolly — Obstetrics & Gynecology
Gary Garshfield — Pathology
University of California/Los Angeles
Keith Gladstein — Pediatrics

Colorado
St. Joseph Hospital, Denver
Jonathan Arnow — Surgery
University of Colorado Affiliated Hospitals, Denver
Kenneth Huttner — Pediatrics

Connecticut
Norwalk Hospital
Alfred Harrington — Medicine
University of Connecticut Hospital, Farmington
Stuart Gardner — Pediatrics
Waterbury Hospital
Carol Pilbeam — Medicine
Yale-New Haven Medical Center
Deborah Blair — Medicine
Paula Braverman — Pediatrics
Thomas Brennan — Obstetrics & Gynecology
Fred Brennan — Medicine
Laura Katz — Pathology
Teresa Massagli — Pediatrics
Christopher Otis — Pathology
Mark Piccirillo — Radiology
Carrie Redlich — Surgery
Robert Rohrbaugh — Psychiatry
Stephanie Rosenblum — Medicine
Philip Sager — Medicine
Paul Sylvan — Medicine
Lynn Tanoue — Medicine
Patrick Toth — Surgery
Laurence Turk — Medicine
Ronald Vost — Obstetrics & Gynecology

Georgia
Grady Memorial Hospital, Atlanta
Craig Lewis — Medicine

Illinois
Rush-Presbyterian-St. Luke’s Medical Center, Chicago
Juan Larach — Medicine

Iowa
University of Iowa Hospitals, Iowa City
Muriel Cyrus — Medicine

Maryland
Johns Hopkins Hospital, Baltimore
Rise Chait — Psychiatry
Sinai Hospital of Baltimore
Henry Jampel — Medicine

Massachusetts
Beth Israel Hospital, Boston
Sylvia Beck — Medicine
Boston City Hospital
Don Stromquist — Medicine
Brigham & Women’s Hospital, Boston
Michele Masi — Medicine
Donald Regula — Pathology
Robert Rizzo — Surgery
Cary Sennett — Medicine
Cambridge Hospital
Alan Brown — Flexible
Children’s Hospital Medical Center, Boston
Jed Gerlin — Pediatrics
Lewis Rubin — Pediatrics
Massachusetts General Hospital, Boston
Joyce O’Shaughnessy — Medicine
New England Medical Center, Boston
Paula Schlesinger — Pediatrics

Michigan
University Hospital, Ann Arbor
Scyrus Cartwright — Medicine

Minnesota
Mayo Graduate School of Medicine, Rochester
George Gaunt — Pathology

Missouri
Barnes Hospital, St. Louis
Jeffrey Gimble — Medicine
Michael Katz — Radiology
Peter Nannum — Medicine

New York
Bronx Municipal Hospital
Charles D. Wright — Psychiatry
Brookdale Hospital Center, New York City
Kamu Kokayi — Family Practice
Harlem Hospital, New York City
Carola Greengard — Medicine
Highland Hospital, Rochester
Beth Connors — Family Practice
Montefiore Hospital Center, New York City
Dan Odenheimer — Surgery
Henry Stern — Surgery
Elien Tattelman — Family Practice
New York University Medical Center-Bellevue Hospital, New York City
Jerrold Levine — Medicine
Presbyterian Hospital, New York City
Daphne Hsu — Pediatrics
St. Vincent’s Hospital, New York City
Liba Goldblum — Flexible
The New York Hospital, New York City
Jeffrey Tepler — Medicine
University of Rochester Hospitals, Rochester
Evangeline Franklin — Medicine
New Zealand
Dunedin Hospital, Dunedin
David Menkes — Flexible

Pennsylvania
Hospitals of University Health Center, Pittsburgh
Michael Curry — Medicine
Richard Doan — Psychiatry
William Sikov — Medicine

Hospital of the University of Pennsylvania, Philadelphia
Lisa Crossley — Medicine
Andrew Fox — Surgery
James Michelson — Surgery
James Reinprecht — Medicine
David Wright — Psychiatry

St. Christopher’s Hospital, Philadelphia
Jane Cross — Pediatrics

Temple University Hospitals, Philadelphia
Katalin Roth — Medicine

Rhode Island
Miriam Hospital, Providence
Lila Inouye — Medicine

Rhode Island Hospital, Providence
Christopher Roberts — Medicine

Vermont
Medical Center Hospital of Vermont, Burlington
David Fassler — Psychiatry
Robert Pierattini — Psychiatry

Washington
University of Washington Hospitals, Seattle
Ethan Lemer — Medicine
Steven Resnick — Pediatrics
David White — Medicine
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Commencement Address, 1982

The Greying of America: problems; research; care

Women in Medicine

Here and About

Alumni News
 Class reunion notes
Alumni Fund Report

Cover: Lounge on the third floor of the Jane Ellen Hope Building, which was opened for use as a teaching facility in October. Funding for extensive restoration and renovation of the building was provided, in part, by the Ira W. DeCamp Foundation, the Pew Memorial Trust, and John B. Oglivie, M.D., ’34.

All photographs in this issue are by T. Charles Erickson.

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O’Dell M. Owens, M.D., ’76; M.P.H., ’76
Rebecca Solomon, M.D., ’39
Lowell I. Goodman, M.D., ’51,
Chairman, Medical School Alumni Fund
This is an auspicious day. We are here to celebrate the conferring of the Doctor of Medicine degree on 28 women and 56 men who constitute the class of 1982 of the Yale University School of Medicine. I congratulate each of you, confident that I speak for everyone in attendance and for family, friends, and teachers who are not. Your achievement testifies that young (and a few not so young) people in our society can still set their own goals and have the discipline, dedication, and patience to reach those goals. At a time of national doubt and introspection, this is reassuring. Your presence here signifies, too, that the unconditional love which your parents have for you, their children, and the sacrifices they have gladly made in expressing that love are rewarded. That is beautiful. Moreover, this commencement ceremony proclaims that this venerable institution of learning, whose architecture can most charitably be described as eclectic, whose educational trappings run the gamut from outmoded to antique, and whose faculty structure most closely resembles that of an anthill, can manage to pull itself together for your benefit. That is amazing.

This is a day, too, of thanksgiving: of children thanking their parents for the tangible and intangible support essential to reaching this milestone; of parents thanking their children for taking a large step toward independent, self-sufficient lives; of teachers and students thanking each other for shared experiences conferring mutual stimulation and sustenance. I wish to add my personal thanks to the class of 1982 for selecting me to speak here today. To be recognized by one’s students is always a special reward for a teacher. To be recognized by you at this unique moment in your professional lives is a singular honor, and one, I can confidently say, that I (the recipient) will remember far longer than you (the bestower). I say this because it is precisely 25 years since I received my M.D. degree on a day and at a place something like this, and listened to a commencement address. Sadly, I must confess to remembering nothing of the message delivered on that occasion. Sadder still, I cannot even recall who uttered those unmemorable words. Fortunately, however, I do remember quite a lot about what ensued in the years subsequent to that blotted out ceremony and it is those reflections I will use in trying to say something that someone of you may remember sometime.

I suspect there are two things on your mind today. One is the hope that this ceremony will be mercifully brief so you can clutch your diploma, kiss your spouses and parents,
hug your classmates, and have a glass of wine. Fear not for I have taken my cue from Muriel Humphrey who liked to remind her loquacious husband, Hubert, that for a speech to be immortal it need not be eternal.

The other matter, only slightly less immediate, concerns your internship, now called many things but still meaning the same thing. When you leave here today some of you will stay in New Haven, others will scatter to every corner of the United States and one of you will go as far away as Dunedin, New Zealand. For most of you choosing an internship has been the major occupation and preoccupation of the past year. Among the rationales given for the enormous amount of time and energy devoted to this process, two stand out.

The first contends that internship marks the rite of passage from student to physician, and with that status change a quantum jump in responsibility and independence. That assessment is correct, I believe. Being an intern is not like being anything else. It is an idiosyncratic year in which extremes become the norm: greater exuberance from medicine than many of you will ever again experience coupled with greater fatigue; an absolute commitment to your work which pushes nearly all other commitments to the background; a time of triumph and of being sorely tested. It is a year for which I envy you, knowing full well interning should not be done more than once.

The second rationale for all the angst associated with internship selection derives from the belief that this choice, more than any other, sets in motion a clear, orderly, even inexorable chain of career events. My experience says otherwise. I chose an internship in internal medicine blithely convinced that I wanted a career largely devoted to clinical practice with some time, perhaps, for teaching. Research was not a serious consideration; specialization in medical genetics was not even imagined since the specialty didn’t exist. If anyone had suggested to me at my medical school commencement that laboratory research and teaching in medical genetics would, in fact, be the major pursuit of my next 25 years, or that I would one day become board-certified in internal medicine only to devote the vast majority of my limited clinical effort to the care of young children with inherited metabolic diseases I would have been incredulous.

Let me explain how this total career flip-flop came about. My internship experience was rewarding and important because I was exposed to teachers who believed that scientific rigor and humane understanding were equally important ingredients for sound medical practice. But my exposure to fellow house officers with quite different career orientations may have been even more important. Most of my colleagues were headed for research fellowships at the National Institutes of Health, because they were imbued with the notion that the rapid progress being made in biochemistry, pharmacology, and physiology would have a great impact on medical practice, and they wished to participate in this surge. So I tagged along, in part because I was vaguely curious about my interest in and ability for research, but more because, in candor, it was the thing to do. Remember, those were the halcyon years of biomedical research in this country and NIH was Mecca. My experience there began disastrously. I found myself participating in metabolic balance studies aimed at understanding the cachexia of terminal malignancy. Caring for a large number of patients dying of cancer was difficult enough. Trying to do detailed metabolic investigations on these debilitated, uncomfortable people was excruciating.

There was, however, one child on the service with a puzzling syndrome characterized clinically by progressive skeletal muscle wasting and chemically by a markedly exaggerated excretion of amino acids in urine. He was a pleasant, bright lad, and caring for him was a welcome respite from my otherwise depressing chores. He was being studied because someone believed that his muscle wasting might, in some way, be likened to that observed in patients with cancer. That idea, for which there was no logical foundation and from which nothing materialized, did not catch my attention. What did fascinate me was the fact that two of this boy’s brothers had an identical clinical and biochemical picture. Each of these boys died of respiratory muscle failure, without definition of the mechanism for muscle wasting or the renal tubular defect.

What did not die was the interest that these children’s illness ignited in me concerning the biochemical and genetic basis of disease. Months later, this spark of interest exploded into a dazzling sense of well being when I carried out some related laboratory experiments which gave interpretable, but by no means, earth-shaking results. Thus, I literally caromed into the emerging field of medical genetics, and have resided there happily ever since.

I am convinced that the series of accidents, chance occurrences, and serendipities which redirected my professional aspirations are not unusual, and feel certain that many of you will be surprised by the unexpected turns your careers will take, and by your inability to anticipate currently what lies ahead. So be open to the year-long happening your internship will be. View it as a rocket carrying you to uncharted space, not as a bow designed to propel you straight toward a target.

Whereas some of your careers will be nudged and deflected by chance, all of your careers will be revolutionized by change. Here again, I will use my past to project your future.

It is impossible to overstate the magnitude of the change the field of medicine has undergone since my graduation. Entirely new biomedical sciences such as molecular genetics and cell biology have appeared, and with them the solution of such fundamental problems as the structure of chromosomes, the nature of the genetic code, and the significance of subcellular organelles. Clinical diagnostic capability has been transformed by such techniques as cardiac catheterization, radioimmunoassay, and computerized axial tomographic scanning. No less dramatic are the therapeutic advances made by the cardiovascular surgeon toward the correction of certain congenital and
acquired heart defects, by the oncologist and radiotherapist in the treatment of certain forms of Hodgkin’s Disease and leukemia, and by the pediatrician in the prevention of mental retardation caused by phenylketonuria. Major diseases such as poliomyelitis, diphtheria, and smallpox have literally or virtually disappeared through population-based immunization and surveillance programs.

This too abbreviated synopsis of the march of progress, sometimes beginning at the bedside and other times in the laboratory, sometimes initiated by clinicians and other times by basic scientists, is part of the medical fabric for you the class of 1982. I refer to it neither to make you, the physicians of the future, feel puffed up by the tools at your disposal nor to make us, the preceding generation of scholars, smug in our accomplishments. Rather I mention what has happened in slightly more than two decades to remind you of what is certain to happen in the next two.

The power of recombinant DNA technology, of monoclonal antibody synthesis, of in vitro fertilization, of nuclear magnetic resonance spectroscopy, and of other, yet undiscovered modalities will be directed toward patient care. You will very likely witness the eradication of malaria, the cure of sickle cell anemia, the understanding of oncogenesis, and even the elucidation of some of the fundamental rules governing nervous system development. You will see more than new medical science with which to embellish your clinical art. You will see radically different systems of computerized medical communication and of preventive services. Lest you fear that these changes will fall on you like an avalanche, let me emphasize that they will occur gradually and that you will participate in and preside over them. They will be part of the natural evolution of your careers provided you develop the critical judgment to distinguish what is truly novel from that which is merely new, the flexibility to embrace rather than recoil from change, the wisdom to discard deeply ingrained but faulty dicta, and the courage to grapple with uncertainty and controversy.

By now, you have probably guessed that I consider you most fortunate to have chosen a career in medicine. Your profession is not constrained by geography or national boundaries. It speaks a worldwide language. Your profession has a continuum which runs from the laboratory bench to the bedside, from hard science to compassionate humanism, from the broad arenas of international and public health to the intimacy of private practice, and from the classroom of the school to the board room of industry. Moreover, you alone are free to determine where along this spectrum you stake your claim and when you see fit to move from one vantage to another. Physicians are rewarded by our society with a degree of economic security unknown to virtually any other group, and with societal approbation that remains unusually strong, despite some selfish and arrogant stances on our part which seem, at times, intent on diminishing our collective esteem. This societal embrace is a token of mankind’s commitment to health and of humanity’s thanks to those who comfort the sufferer.

Nor is your good fortune diminished by the increasingly large shadow that health concerns and health expenditures cast on our world. Rather your opportunity to serve is enhanced because you will have even more ways to express your individual talents and beliefs. For example, doctors of medicine will be found in increasing numbers as elected legislators and appointed executives where they will act as spokesmen and women on public issues whose understanding, even resolution, will depend on the physician’s critical perspective. This will be good, I believe, for both society and medicine. We do have a unique perspective which is as important to the public dialogue on matters like occupational safety and reproductive options as our responsibility for expressing that perspective is large.

Let me close by drawing on my ethnic rather than my medical roots. At celebrations like this one, Jews say two things. We say “Mazel tov” which means good luck, and you will need luck in the years ahead as much as any of the technology or compassion in your possession. Perhaps more to the point, Jews toast celebrants with the word “I’chaim” which means to life. It is, after all, to life that your formal medical education has been directed and to which your careers will ever be devoted. And so, to each member of Yale Medical School’s Class of 1982 I say “I’chaim” — to your lives, to the lives of your loved ones, to the lives of the people who will be entrusted to your care, and to the lives of all humankind poised so fragilely on this vulnerable, little star.
THE GREYING OF AMERICA: problems; research; care

By Marjorie B. Noyes

While Madison Avenue is waging its multi-million dollar campaign to keep Americans forever young, the hard fact is that in spite of cosmetics guaranteed to melt away wrinkles, dozens of books with instructions on how to have a fit and youthful body and $100 designer sweat suits to wear while doing so, a large portion of the population is getting old. The over-75 year old group is now the fastest growing segment in the nation. Twenty-six million Americans are 65 years and over; the population 85 and over is 2.4 million. Census Bureau projections indicate these figures will nearly double by the year 2025.

There are implications in these statistics for students of health care. While some elderly people are truly enjoying the Golden Years, others are in poor health and many are disabled by severe arthritis and skeletal disorders, chronic obstructive pulmonary disease, diabetes, peripheral vascular disease, congestive heart failure and other disorders associated with old age.

THE WORST OF ALL DISEASES

By far the most pervasive and debilitating problem of aging is senility or senile dementia. An estimated 2.5 million American adults suffer some sort of dementia.

The most prevalent form. Alzheimer’s disease, affects over a million people. They occupy over half of the 1.2 million nursing home beds in the country at a cost now exceeding $10 billion and expected to increase to $40 billion or more within a few years.

Dr. Lewis Thomas, former Dean of the School of Medicine, now Chancellor at Memorial Sloan-Kettering Cancer Center, has described Alzheimer’s disease as the “worst of all diseases, not just for what it does to the victim, but for its devastating effects on families and friends. It begins with the loss of learned skills, arithmetic and typing, for instance, and progresses inexorably to a total shutting down of the mind.” He wrote. “It is, unmercifully, not lethal: patients go on and on living, essentially brainless but otherwise healthy, into advanced age, unless lucky enough to be saved by pneumonia.”

Changes most commonly associated with Alzheimer’s disease occur in the protein of nerve cells in the cerebral cortex, causing accumulation of abnormal fibers, which when viewed under a microscope, appear as a tangle of filaments. Scattered throughout the cortex, groups of nerve endings degenerate and disrupt the passage of electro-chemical signals between the cells. These areas are called plaques. The larger the number of plaques and tangles, the greater the disturbance in intellectual function and memory. Research has also revealed that Alzheimer’s patients have a reduction, often as much as 90 percent, of the brain enzyme choline acetyltransferase, which is involved in the passage of nerve signals and is crucial to memory function.

What causes this devastating condition? It is not, as has been assumed for centuries, the consequence of the natural process of aging: nor is it due, as was once thought, to hardening of the arteries. The cause remains a mystery.

Dr. Elias E. Manuelidis, professor of neuropathology and neurology, and his colleagues, Dr. Laura K. Manuelidis, associate professor of neuropathology, and Dr. Jung H. Kim, assistant professor of neuropathology, are among a small group of scientists working on the hypothesis that Alzheimer’s disease is caused by a slow-virus of the type recovered from brain tissues of victims of the fatal but rare form of dementia, Creutzfeldt-Jakob disease.

Dr. Manuelidis has devoted most of the last seven years to the study of dementias, and was the first to transmit Creutzfeldt-Jakob virus to small laboratory animals such as guinea pigs, hamsters and mice. Because it has not been possible so far to transmit Alzheimer’s disease to laboratory animals, he and his research team use these animal models for their slow-virus research.

The slow-virus hypothesis is based on a few significant similarities observed between Creutzfeldt-Jakob (C-J) disease and Alzheimer’s disease. Although C-J patients usually lapse into a deep coma shortly after the onset of the disorder, and die within a year or two, while Alzheimer’s patients can live for quite some time, patients of both experience the dramatic personality change, memory loss and dementia noted by Dr. Thomas. The two diseases are characterized by degeneration of nerve cells in the brain and an increase of supporting cells called glia cells, and there is a marked deficiency in choline acetyltransferase enzyme in the cortex.

According to Dr. Manuelidis, lesions in the brain characteristic of Alzheimer’s disease, have been found in up to ten percent of patients who died of C-J virus; while spongy areas in the nerve cells characteristic of C-J virus, have been found in the brain of persons who have died of Alzheimer’s disease. The literature notes that some members of the same family have had C-J disease while others have had Alzheimer’s disease. The symptoms were so similar that only post-mortem examination could clarify which member had C-J disease and which had Alzheimer’s disease.

Dr. Manuelidis and his colleagues will study the mechanisms and progress of C-J disease in laboratory animals and compare them with symptoms observed in patients with Alzheimer’s disease. The ultimate goal is to learn about the structure and function of the enigmatic slow-virus and to apply this knowledge to a better understanding of Alzheimer’s disease.

This fall, two significant grants underscored the importance of the research. The Commonwealth Fund awarded a grant of $225,000 in support of a full-time investigator in the study, for five years. The National Institutes on Aging awarded the School of Medicine over $1.3 million in
support of Dr. Manuelidis' research for a period of five years.

This type of long-term support is extremely valuable to this research. Studies of slow-viruses take a long time and are painstaking. When injected into susceptible laboratory rodents, the virus produces no evidence of the disease for eighteen months or longer, after which there is rapid destruction of the brain. To begin with, it requires an enormous amount of funding just to maintain a colony of laboratory animals in good health for a year and a half or two, but that is not the only reason.

Scientists working on slow-viruses are essentially working in the dark. Unlike other viruses, slow-virus does not seem to consist of particles visible by electron microscope or detectable by chemical methods; and although it multiplies itself thousands of times over in the affected brain, no one has discovered nucleic acid in slow virus. It may well be that it is self-replicating with its own DNA or RNA, or it may be similar to a class of very small viruses found in plants. There is not even the slightest knowledge of how it functions.

Dr. Elias Manuelidis

As Dr. Thomas noted, the work requires more time and more money than most biomedical scientists believe they have at their disposal these days. "If you were planning to inject samples of a suspect virus into an array of experimental animals, the thought of an interval of a year-and-a-half or two years before you could reasonably expect even a preliminary, tentative answer would stay your hand... By the time you finished your first experiment you would be near the end of your first grant, most likely with nothing to show for it..."

These obstacles have not discouraged Dr. Manuelidis, who continues his research with enthusiasm and optimism. "There are two reasons," he stated simply. "First and foremost, there is the possibility for finding the cause and maybe a way to treat the most terrible disease in humans. Then there is the tremendous challenge to unravel the mystery of this incredible virus, which so far has eluded all attempts by the most sophisticated scientific investigation."
as the patients themselves."

The Clinic helps patients and their families deal with chronic disorders, long-term disabilities and general psycho-social problems that leave elderly patients unable to care for themselves. A majority of the patients have Alzheimer's disease. Thorough physical examination by Dr. Schaffner, and if necessary, a psychiatric examination by Dr. Frances Baker, assistant professor of psychiatry, is given each patient. The staff, including Nan Scholhamer, a social worker, then meet with the family to discuss treatment of physical and/or mental problems and to assist in making arrangements with various community-based social services to provide home care or arrange for institutional placement if it becomes obvious that the family can no longer cope.

Records are kept of each patient and follow-up is a part of the program. Through this, the staff is attempting to determine which medical, mental, environmental and social factors best predict a patient's ability to remain in his or her own home. In addition, they are undertaking studies on the effectiveness of various drugs for treating Alzheimer's disease and other organic mental conditions. Although the Clinic has been in operation for only a year, it is becoming a model for multi-disciplinary care for the elderly.

Today's medical students are mostly interested in the more challenging aspects of the profession. In contrast to specialties such as cardiology, immunology or cardiology, geriatrics might seem pretty low-key. Dr. Andrea Schaffner disagrees. "There is something quite challenging and rewarding about trying to improve a person's final years," she said.

A graduate of Columbia University's College of Physicians and Surgeons, Dr. Schaffner came to Yale-New Haven Hospital as an intern in internal medicine. In 1981, she was awarded a fellowship in geriatrics, working with Dr. Leo M. Cooney, associate professor of medicine and director of the Continuing Care Unit, and this year she was appointed assistant professor of medicine, as well as medical director of a local nursing home.

The Geriatric Assessment Clinic is an outgrowth of the Continuing Care Unit, which is dedicated to returning to their homes as soon as possible, elderly patients hospitalized with acute problems such as amputation, cardiothoracic surgery, rheumatoid arthritis, and hip fracture. Many of these patients would otherwise be at risk for long-term placement in nursing homes. The 13-bed Unit, where the average patient stay is about two weeks, is as well, an educational resource for residents and medical, nursing and physical therapy students.

Dr. Cooney and Dr. Schaffner are very interested in improving education in the care of the elderly, and have developed electives in geriatrics for house staff as well as medical students. They treat the subject not as an extension of internal medicine, but as a sub-specialty in itself.

Speaking at the 1982 Gerontological Society's annual scientific meeting, Dr. Cooney said, "The clinical years in medical school and throughout house staff training mold our clinical judgement and form the basis for much of our clinical strategies . . . Clinical strategies must often be altered in the very old patient. The standard "work-up" must be altered in view of the often fragile physiologic reserve of the elderly person. A simple contrast gastrointestinal work-up can have significant side effects in the elderly, in that the patient can become quite dehydrated and debilitated from the preparation and completion of these studies. Blind adherence to normal serum levels and rote work-ups of abnormal findings can often have disastrous consequences."

"There is much research to be done to answer many of these strategy questions," he continued. "What is the value versus the morbidity of various diagnostic evaluations in the elderly? Should the elderly patient with a myocardial infarction be moved from a skilled nursing facility to an acute coronary care unit? What are the 'normal' serum drug levels in the elderly?"

"Physicians are extremely important individuals in their patient's long-term care decisions," he told the audience. "Families and patients are often referred to physicians for advice regarding the site and type of care that will be given. In addition, physicians must certify most types of institutional and home care. This role must be recognized and the young physician must be prepared to assess the functional needs of the patient and to help organize the provision of resources to fill these needs. The student must be taught simple methods of assessing a patient's ability to care for himself and to recognize that the ability to get out of bed and walk to the toilet may be much more important to the elderly patient than the level of the serum calcium."

In conclusion, he emphasized, "Substantial progress in the care given to the dependent elderly patient requires a strong geriatric force at each medical school and center. Full-time faculty physicians must have as their major focus research, service, and teaching in care of the elderly. The scholarly efforts of these physicians must be supported and their research efforts nurtured if geriatric medicine is to be well taught to students in their clinical years."
An Exhibition Portrays the History of Women in Medicine

Women have practiced the healing arts since the earliest times, according to a concise exhibition of "Images of Women in Medicine" on view in the Cushing Rotunda of the Yale Medical Library through December. Prepared by Dr. Diane Puklin, a medical historian, with Susan Alon, secretary to the Medical Historical Library, it traces the perceptions of female anatomy and concepts of women's contributions to reproduction as well as the role of women as healers, from Biblical times through the 18th century — a period not often dealt with in women's studies.

Unusual anatomical engravings made three dimensional with layers of lifting paper shutters; an exquisite ivory mannequin, probably 17th century German, with the abdomen open revealing a finely carved fetus, and other beautiful illustrations show the slow progression through the centuries to an accurate understanding of female anatomy.

Equally engrossing and well documented are early perceptions of women's contributions to reproduction. This section traces the evolution of Aristotelian and Galenic concepts of reproduction from their original sources through their medieval expressions and culminating in their faithful reiterations in treatises of the 16th century. It also contains drawings by Andreas Vesalius and the 17th century physician, Jan Swammerdam, who successfully challenged these early theories.

For women practicing and studying medicine, however, the most important section of the small exhibition may well be that part describing early women healers using texts from Biblical acknowledgment of midwifery (The Book of Exodus) to post-Renaissance obstetrical treatises written by women. "Legends abound of famous female healers, whose identities are not sufficiently supported by historical evidence," according to the introductory narrative. "These legends are important not only for the historical figures they name, but also for the attitudes towards women healers they reveal."

Legend tells of Agnodice, a young Greek woman of the 4th century B.C., who, in order to study medicine, dressed in male clothing. She attended the lectures of Herophilus of Chalcedon (Alexandria), and learned to tend and teach other women. Rival physicians, jealous of her skills, dragged her before an Athenian council, where she revealed her true identity. The wives of the councilmen defended her good offices, according to the tale. The councilmen heeded their appeals, and Agnodice was allowed to continue her practice.

Most of the information about women healers in ancient times is based on treatises, according to Dr. Puklin, but these represent only a small portion of women involved in the healing arts. "They were a conglomerate of different types and of different training," she explained. "Those writing texts presumably had monastic or university educations. Beyond that, there were women who took their place among those trained in the craft — just as the glass blowers or the weavers did — and learned to do their healing procedures through experience and apprenticeship."

In Italy in the fifteenth century, for example, women practiced surgery. It was a craft passed from fathers to their children. If he had no son, the father would teach his daughter rather than a nephew or the son of a neighbor. They obeyed very rigid codes of entry into practice. Other women practiced midwifery or were herbalists — and there were some empiric physicians as well.

Maternal care and delivery historically were tasks performed by healing women. The women who attended to these strictly female conditions had recognized proficiency. Called midwives or sage-femmes, they included women of wealth and social standing as well as women whose livelihood depended on their practice. They assisted at the birth of emperor and commoner alike and often were honored and lavishly awarded for their services.
One such woman was Justine Dittrichin Siegmundin (1650–1705), whose influence persisted well into the 18th century. Recognizing her obstetric skill, Frederick III appointed her court midwife to Brandenburg, and later in 1701, court midwife in Prussia. In 1690, she published *Die Chur-Brandenburgische Hoff-Wehe-Mutter*, an authoritative text in the form of a dialogue.

Some midwives, especially those in Italy during the 16th and 17th centuries, studied at universities and published on gynecological matters. Isabella Contese, for example, flourished as a student and midwife during the Italian Renaissance. She wrote on female disorders and on cosmetics, a relatively obscure area of healing arts dating to antiquity, which was widely practiced by women of her era. Most midwives, however, learned their trade at the bedside and rendered prenatal counseling, delivery, and infant care without recording for history their experiences.

The importance of the woman healer was predicated not only on certain knowledge they possessed, but also because of their proximity to the sick. Women were the heads of the estates or manors, and therefore were responsible for taking care not only of their families, but also the serfs and their families. It was a logical extension of their nurturing role.

In his tales of the Knights of the Round Table, the 15th century author, Sir Thomas Malory describes such women. Morgan Le Fay, Queen Isolde and Maiden Lynette are but a few of the women who “serched his wounds, and stynted his blood.” In the exhibit, “La Beale Isoud, who was a noble surgeon” illustrates women in the duties of both leech and surgeon throughout Arthurian legends.

Most healing then was done with herbs. Since women tended the gardens it was natural that they also mixed the herbs. “What we are learning through intensive studies of herbal medicine today is that a number of these medicines were exceptionally specific and could not have been derived by happenstance,” Dr. Puklin stated. “They were applied by women of the past who, avoiding philosophical constraints of the time, used the same techniques of observation and reason and drawing conclusions that Hippocrates emphasized over and over again as the basis for all medical remedies.”

“From this particular aspect of the exhibition we were trying to imply the sense of importance of the woman as healer in the societies from Biblical times until the 18th century,” she continued. “Then in the late 18th and early 19th centuries, when medical knowledge rapidly increased simultaneously with the rise of ‘capitalism’ in the middle classes, medicine became professionalized. In the past people in medicine had struggled to become professional without success. Therefore we see some of the polemics against women in medicine beginning then. For instance, in the late 18th century, male midwives challenged female midwives, and began to encroach on women’s long-recognized field,” she explained. “Put the midwifery movement today in this perspective and you can see the origins of some of the resistance to it. The diminution of women’s influence in obstetrical care really began to gather momentum in early 19th century.”

Although “Images of Women in Medicine” is a small exhibition constrained by a lack of space and some materials, it is beautifully documented. One could wish for more illustrations in each of the three categories covered, but as it is, it evokes interest and curiosity about the subject.

By Marjorie Noyes, based on an interview with Diane Puklin, Ph.D.
Office for Women in Medicine

Today, many women are pursuing careers once considered for men only — law, religion, architecture, medicine — to name a few. For some, entry into these male-dominated bastions has been smooth, while other women have found that old prejudices die hard.

About a third of the medical students at Yale are women, and there are increasing numbers of women postdoctoral fellows and faculty. More than a few have discovered that being involved in medicine in a traditionally male institution can be rough going.

In 1975, with support of Dean Robert Berliner and Deputy Dean Arthur Ebbert, Jr., on recommendation of the late Dr. Phyllis Bodel, the Office for Women in Medicine was founded. It has come a long way in seven years from the humble basement office with an indomitable part-time student administrator, to its present comfortably furnished quarters, with a staff of two dedicated, extremely busy women. Kay D. Codish, director, and Ann Baidack, assistant to the director, produce an extraordinary number of programs and workshops, in addition to publishing a newsletter and offering support services to women students and faculty.

One of the few organizations of its kind in the country, the Office for Women in Medicine (OWM) is "committed to advancing the professional standing and personal lives of women in medicine and the medical sciences, helping them counter the prejudices and discrimination, sex-role stereotyping and compromise of personal life common to women in twentieth century medicine," according to a brochure distributed by the Office. A part of the School of Medicine administration, the OWM is concerned with advocacy, program development, counseling, research and referral. The issues they are concerned with are specific to women in medicine throughout the country — limitations in medical school admissions, discrimination in hiring and promotion policies, lack of visible role models, salary inequities, and limited access to the traditionally "male" specialties.

Combining an interest in medical science and a strong commitment to women's rights with her background in the theater, Kay Codish orchestrates the many activities of OWM in much the way a theater director would a stage production. The approach is effective.

A lively speaker series brings notable women in medicine to the School for discussions of relevant issues. Last year, for instance, the series included such topics as tenure at Yale; dual career marriages; alpha-fetoprotein screening; pro-choice abortion tactics; reproductive health hazards for women; medical attitudes towards death and dying; minority women in today's medical system; nurse/doctor relationships; and substance abuse among medical professionals. A number of lectures are offered on stress management, and budgeting and financial management for professional women.

Last year, the OWM sponsored a day-long workshop "Women Meeting Women in Medicine," offering an opportunity for women physicians of diverse backgrounds and disciplines to meet with women medical students. Co-sponsored by the Connecticut branch of the American Medical Women's Association, the event was highly successful. A few months later, Ms. Codish and Ms. Baidack put a tremendous effort into the presentation of a two-day conference on "The Crisis of Battering: Professional Response." Co-sponsored by the Victimology Program of Yale-New Haven Hospital, it attracted a large audience of health care professionals, educators and service providers, including law enforcement officers.

Social isolation is one of the most pervasive problems of women in medicine, according to Ms. Codish. This is especially true in the case of postdoctoral students, who often work odd hours in the laboratories and have little opportunity to meet other students. An overstuffed brown velvet couch, a caned rocking chair, lots of books and magazines on women's concerns provide a friendly atmosphere in the office where women can meet and chat — or just relax from the rigors of study and work. Potluck suppers, especially the annual one held at the home of Dean and Mrs. Berliner, are another popular means of bringing together women faculty and students.

One of the more important aspects of OWM is providing access to various support groups for women faculty and students, spouses of interns and medical students, and single mothers. It also offers an opportunity for discussing personal and academic problems on an individual basis, and can, on request, provide an annotated list of local therapists and counselors.

As a part of the University's equal opportunity/affirmative action program, the OWM collects statistics on women and minority faculty members, housestaff and postdoctoral trainees. This mechanism for complying with affirmative action guidelines, monitoring accountability and achieving goals is being developed into a computerized system to store and evaluate on an ongoing basis information regarding salary, rank and promotions. At the same time, a log of sexist comments and incidents is maintained by the office to record incidents of sexist behavior and harassment at the School of Medicine. The OWM encourages women to report such incidents, to discuss their complaints and to use grievance procedures to file complaints when treated unfairly or treated in an offensive manner.

Although some of these activities are necessarily defensive, OWM is concerned not only with fostering and promoting activities, policies and strategies favorable to women in medicine, but also with demonstrating the enormous contribution women make and have always made to the medical and scientific professions. To this end it is planning to document the varied involvement of women affiliated with Yale medicine and science from 1916, when women were first admitted to the School of Medicine, to the present. There has yet to be a woman chairman of a department or a woman dean, but Yale's women medical graduates and faculty have made many very significant contributions to the profession.
The First Yale Women Medical Graduates

There were three women and thirty-two men in the Class of 1920 — the first class after the Yale Corporation voted in 1916 to accept women students in the School of Medicine. They were Louise Whitman Famam, who had received a Ph.D. degree in physiological chemistry from Yale; Helen May Scoville, a graduate of Wellesley College; and Lillian Lydia Nye, who had received B.A. and M.A. degrees from the University of Minnesota. Lillian Nye dropped out of the class to finish her medical studies at Johns Hopkins University, but Helen Scoville received her M.D. degree, cum laude, as did Louise Famam, who was also awarded the Campbell Gold Medal, given the student with the highest rank in exams upon graduation.

Dr. Scoville, one of the first women other than secretaries, librarians and nurses, to be hired by the School of Medicine, became an instructor in pathology and bacteriology. In 1936, she left Yale to attend at the House of Mercy Hospital in Pittsfield, Massachusetts.

After graduating from Yale, Dr. Famam studied obstetrics at Johns Hopkins, following which she spent six months as an intern in pediatrics at Bellevue Hospital in New York. Then she was on her way to Changsha, China, where she was one of the first doctors in the Yale-in-China Association’s Yali Medical School. As a doctor in China she was called on to do much more than her specialty of pediatrics — and during the revolution she spent more time treating war injuries than treating pediatric patients. In the summer of 1930, when Mao’s army stormed Changsha, the hospital personnel fled. Dr. Famam was the last to leave and the first to return. “I hated to go off and leave a man with a bullet in his chest liable to have pneumonia, with no doctor on board. So I stayed,” she wrote.

Dr. Famam was married to Hugh Brian Wilson, an English businessman in 1931, and in 1933 moved to England, where she continued to practice medicine. During World War II, she replaced home medical service doctors who were called into war service, for which she received commendation from the British government.

Yale Enters A Cooperative Research Agreement with Bristol-Myers for Development of Anticancer Drugs

Bristol-Myers Company and Yale University have entered into a $3 million cooperative research agreement to facilitate the production and availability of new anticancer drugs.

The agreement brings the investigative talents of Yale medical scientists, who are recognized leaders in cancer chemotherapy research, together with the research and developmental resources of Bristol-Myers Company, a major producer and distributor worldwide of anticancer agents. Through ongoing technical and scientific interaction, they will seek to employ the unique resources and skills of university-and industry-based approaches to development and production of new effective and safe drugs for the diagnosis and treatment of neoplastic diseases.

President A. Bartlett Giamatti of Yale stated that he was extremely pleased with this major step forward in cooperative research. “The agreement with Bristol-Myers is testament to the opportunity for the University and industry to collaborate in areas of mutual research interest under conditions which don’t infringe our underlying principles of openness and free dissemination of ideas,” he said. “It is particularly rewarding to combine the skills of Yale’s scientists with those of their industrial colleagues and to apply these in true cooperative fashion to the solution of major health problems such as cancer. The results of such collaboration serve the interests of the University, industry and of the public.”

Richard L. Gelb, Chairman of Bristol-Myers Company, said, “We are pleased to join in this collaboration with Yale. We believe this program can make an important contribution in the development of significant advances in cancer therapy.”

Yale is one of very few research institutions in the world where scientists involved in the development of a new anticancer drug work together from the first experiments at the laboratory bench through to treating patients in the
effects of a number of drugs which have been used with some success, by revising the scheduling of their administration, and by utilizing them in combination.

Bristol-Myers Company will provide support in the amount of $600,000 a year for five years to the Yale School of Medicine for research in oncology. The Company has the option to license cancer chemotherapy drugs discovered by participating faculty during the agreement period.

Unlike cardiovascular, antimicrobial, and anti-inflammatory drugs, where investment to produce them can be readily recovered a few years after they enter the market, the probability of producing a major anticancer drug capable of returning the exceedingly large investment required to produce, test, and market it, is very low. For this reason, according to Dr. Alan C. Sartorelli, chairman of the Department of Pharmacology and head of the Section of Developmental Therapeutics of the Comprehensive Cancer Center at Yale, many drugs of possible use in the treatment of cancer discovered in university laboratories do not become patented and developed, and remain merely laboratory curiosities.

"Although universities with support from government and private sources have the intellectual capability and resources to identify the new drugs with the potential for treating cancer, the resources of industry are required to conduct toxicology tests for safety essential for their production and distribution throughout the world. This collaborative venture could result in the movement of more agents with unique mechanisms of action to clinical trial and eventually, to public use," he said.

"It is with these goals in mind that Yale University and Bristol-Myers Company enter this collaborative scientific program."
A New Chairman Appointed for the Department of Molecular Biophysics and Biochemistry

Dr. Dieter G. Söll, a leading scientist in the field of transfer ribonucleic acid, has been appointed chairman of the Department of Molecular Biophysics and Biochemistry. Dr. Söll has been professor in the department since 1976.

Born in Stuttgart, Germany, Dr. Söll received a Diplom Chemiker in 1960 and a Ph.D. degree in chemistry, summa cum laude in 1962, both from Thechnische Hochschule in Stuttgart. He came to the United States in 1962 as a postdoctoral fellow at the University of Wisconsin's Institute for Enzyme Research, and from 1965 to 1967, he was assistant professor there. He was appointed associate professor of molecular biophysics and biochemistry at Yale University in 1967. He was Visiting Professor of the Japan Society for the Promotion of Science in 1972, the same year he was awarded a Guggenheim Fellowship.

The author of numerous scientific papers, abstracts and reviews, Dr. Söll has been executive editor of *Nucleic Acids Research* since 1974, and serves on the editorial boards of the *Journal of Bacteriology* and the *Journal of Biological Chemistry* as well. He was co-chairman of the Gordon Research Conference on Nucleic Acids in 1973; of the Banff Conference on the Genetics and Biochemistry of Suppression in 1975; and the Cold Spring Harbor Meeting on Transfer RNA, 1978. He is a member of the American Society of Biological Chemists, American Chemical Society, and the American Society for Microbiology.

Dr. Evans Appointed John Rodman Paul Professor of Epidemiology

Dr. Alfred S. Evans, a distinguished scientist in the field of preventive medicine, has been named John Rodman Paul Professor of Epidemiology. Dr. Evans has been professor of epidemiology and director of the Section of International Epidemiology and the WHO Serum Reference Bank at Yale since 1966.

The professorship honors a world-renowned member of the Yale faculty from 1928 to 1961, who developed the science of clinical epidemiology, and whose research was instrumental in determining the causes of rheumatic fever, infectious hepatitis and infectious mononucleosis. Dr. Paul, who died in 1971, is especially noted for his studies on poliomyelitis, which were significant contributions to the understanding of the disease, and ultimately, to the successful immunization programs.

Dr. Evans is a well-known authority on infectious diseases and especially on infectious hepatitis, mononucleosis and diseases of the lower respiratory tract. A graduate of the University of Michigan, he received his M.D. degree from the University of Buffalo, and his M.P.H. degree from the University of Michigan School of Public Health. Following military service as a medical officer with the U.S. Army in Japan, Dr. Evans joined the School of Medicine faculty in 1946 as instructor and then assistant professor in the Section of Preventive Medicine.

From 1950 to 1952, he was recalled to active duty with the Army and served as chief of the Hepatitis Research Laboratory, 98th General Hospital, in Munich, Germany. In 1952, he was appointed associate professor of preventive medicine and microbiology at the University of Wisconsin School of Medicine. He served as professor and chairman of the Department of Preventive Medicine there and as director of the Wisconsin State Laboratory of Hygiene from 1959 to 1966, when he returned to the Yale School of Medicine. Dr. Evans is the author of numerous publications, including *Viral Infections of Humans*, published by Plenum Press, for which he received the American Medical Writers Award for the best book written for physicians in 1977. He was awarded the Thomas Parran Lectureship and Medal by the University of Pittsburgh in 1978. A fellow and member of the Board of Directors of the American College of Epidemiology, he is a member of a number of other professional societies as well, including the American Association of the History of Medicine; American Epidemiological Society; American Medical Writers Association; and the American Society for Tropical Medicine. Dr. Evans has served as a Consultant in Epidemiology to the Surgeon General, U.S. Army, and was president of the Society of Medical Consultants to the Armed Forces in 1980–81.
Dr. Kantor Named Paul B. Beeson Professor of Medicine

Dr. Fred S. Kantor has been appointed Paul B. Beeson Professor of Medicine. A professor of medicine since 1973, he is well known for his research on the immune responses in man.

The Paul B. Beeson Professorship honors a former member of the Yale medical faculty who served as chairman of the Department of Internal Medicine from 1952 to 1965. This outstanding medical scientist and distinguished teacher is now retired and living in Seattle. As a Helen Hay Whitney Fellow at Yale, Dr. Kantor studied under Dr. Beeson in 1960–61.

A graduate of Union College, Dr. Kantor received his M.D. degree from New York University School of Medicine in 1956. The following year he was an intern at Barnes Hospital in St. Louis, Missouri, and from 1957 to 1959, he was research associate at the National Institute of Allergy and Infectious Disease, National Institutes of Health.

Dr. Kantor came to the Yale-New Haven Medical Center in 1959 as assistant resident in medicine, and in 1962 he was appointed to the faculty as instructor in medicine. He was promoted to assistant professor the following year, and to associate professor in 1967.

In addition to his appointments at Yale, Dr. Kantor has been honorary research associate in the Department of Zoology (Tumor Immunology) at University College in London (1975–76), and a visiting professor of medicine at Pahlavi University, Shiraz, Iran, and at Hebrew University, Hadassah Medical Center, Jerusalem. He is a member of the American Association of Immunologists, American Board of Internal Medicine, American Academy of Allergy, American Society for Clinical Investigation, and the Council on the American Heart Association.

C.-E. A. Winslow Professor of Public Health Named

Dr. James F. Jekel, an expert in health programs evaluation, has been appointed C.-E. A. Winslow Professor of Public Health. He has been a professor in the Department of Epidemiology and Public Health since 1980.

The professorship was established in 1958 in memory of Charles-Edward Amory Winslow, one of the nation’s most prominent public health teachers and leaders. Dr. Winslow organized the Yale Department of Public Health and from 1914 until 1945 served as its first chairman. Many of the Department’s current programs reflect C.-E. A. Winslow’s interests, some of which are only now emerging as nationwide public health issues.

Dr. Jekel is an authority on programs for pregnant adolescents. In 1975, he was awarded the first annual research award of the National Alliance Concerned with School Age Parents.

Dr. Jekel came to Yale in 1967 from the Center for Disease Control, where he had been a commissioned member of the U.S. Public Health Service since 1962. A graduate of Wesleyan University, Middletown, Connecticut, where he was elected to Phi Beta Kappa Honor Society, he received his M.D. degree from Washington University School of Medicine in St. Louis, and an M.P.H. degree from Yale University.

Dr. Jekel was an intern and an assistant resident at Hartford Hospital.

He is a member of the study section on social sciences and population of the National Institutes of Health, and of the maternal and child health section council of the American Public Health Association. In addition he is a fellow of the American College of Preventive Medicine and of the American Scientific Affiliation, as well as a member of the Association of Teachers of Maternal and Child Health, of which he was president from 1978 to 1980.
In celebration of the dedication of its new patient care facility, the Yale-New Haven Hospital presented a symposium on "Ethical Issues in Health Care." Four distinguished speakers and a panel probed some of the most sensitive issues currently facing the medical profession.

The speakers were: Paul B. Beeson, M.D., former chairman of the Department of Internal Medicine at Yale, now professor of medicine emeritus, University of Washington; Lawrence G. Crowley, M.D., vice-president for medical affairs, Stanford University Medical Center; Albert R. Jonsen, Ph.D., professor of ethics in medicine, Institute for Health Policy Studies, University of California at San Francisco; and Joseph B. Warshaw, M.D., former professor of pediatrics and obstetrics and gynecology at the School of Medicine and director of the Newborn Special Care Unit, Yale-New Haven Hospital.

Setting the tone of the symposium, Dr. Jonsen cited three of the most challenging health care issues: medical research using human subjects, limited access to lifesaving technologies, and the appropriate use of life support. The medical technologies raise highly technical and legal questions, yet beyond the jargon and legal arguing lie some of the oldest questions of society — what are the basic rights of the individual; who shall receive preferred treatment; and when does life lose its value?

"The message of bioethics consists not in making definitions about resuscitation or informed consent, not in issuing regulations about research," he stated. "It announces that the forms of care provided to preserve and restore human health must reflect the deepest moral beliefs of our culture."

Following Dr. Jonsen, Dr. Beeson stressed that health care must be appropriate for those being cared for, and illustrated how right — and how wrong — extraordinary measures can be in prolonging the lives of the elderly.

He told of an elderly patient who had suffered multiple serious injuries in an automobile accident. Wheelchair-bound and in great pain for months, the man passed through so many medical crises that his survival was termed a "miracle." On the way to see his patient in the hospital, Dr. Beeson had to drive by a very poor school with few recreational facilities. "I must admit I sometimes thought that the tremendous sum spent on that man's care could have been better spent on the school," he said. However, the man lived for some years, enjoying life, pleased to be with his family, and glad to have received care.

On the other hand, Dr. Beeson spoke of a friend, who was suffering with cirrhosis and who did not have such good fortune. No longer able to respond to medication, he underwent emergency surgery. "For the next five days until he died, he hung on in the intensive care unit. Because of all his tubes and lines, he couldn't speak to his wife or touch her. But he winked at her." Dr. Beeson told the audience, "I kept going in and out of there and I thought to myself — what have we done to give this man such a horrible way to die?"

Dr. Beeson then turned to the difficult decisions created by the very high cost of caring for the elderly, citing passive mercy killing methods such as cutting back on fluids, withholding fluids, and issuing orders not to resuscitate the patient. "We must never lose sight of the risk that these practices can put us on a slippery slope leading to inhumane practices," he cautioned.

Dr. Crowley told the audience while the percentage of industry-supported research in universities has generally declined over the last 30 years, the new field of genetic engineering has aroused mutual interest between industry and campuses as never before. The reasons: genetic engineering possesses great profit potential; most of the scientists with expertise in the field are in the universities, while industry has most of the money.

"The problem is that industry and universities work in different ways towards different ends. Universities seek to create and freely spread new knowledge for human betterment. By contrast, industrial concerns control and withhold knowledge so that their products command a commercial edge," he explained. Yet there is much to be gained by cooperative research, according to Dr. Crowley. "The key is for universities to keep their basic values foremost so as to protect their essential value to society."

Towards that goal, he suggested full public disclosure, in advance of all university/industry agreements; "no strings attached" industrial investment in university research; new patent and licensing agreements to reward the initiative of faculty members; and generous faculty leaves of absence so that professors can explore industrial jobs without creating conflicts of interest.

Twenty years ago, as neonatology began to emerge as a sophisticated medical discipline, Yale-New Haven Hospital established the first newborn special care unit in the nation. Since then, enormous progress has been made in caring for infants at risk. For example, when the Yale Newborn Special Care Unit began less than half of infants weighing two- to three-and-a-half pounds survived. Those who did often suffered severe, permanent damage from the inexact therapy of the day. Today, more than 90 percent of these infants survive, most in remarkably good health.

"Judging from these advances, we have had great success," said Dr. Warshaw, who has been director of the Unit for the last seven years. "However, we now face major questions as we search for an appropriate balance between technology, humanity and expectation."

Beyond question, the staff of the Newborn Special Care Unit can do remarkable things on behalf of the almost 1,200 sick infants seen there each year and their families. What to do, however, and whether to do it are often difficult issues for families and Unit staff to decide.

Recent negative publicity and resultant investigations have focused public debate and legislative pressure on physicians. The cruel irony of the situation is that care givers have been criticized both for over-using and hesitating to use life-supporting technology. "There are no simple rules," Dr. Warshaw said. "Each case is different. What is a good decision for one family may be inappropriate for another. We must listen to families as well as to our own most informed medical judgments.

"Those of us who work in newborn medicine are experts in understanding medical processes," he continued. "We are experts in applying the very technologies which have created many of the ethical questions in newborn medicine. Hopefully, we are sensitive, compassionate, and will never lose our capacity to empathize with those who..."
Hospital Dedicates its New Patient Care Facility

It poured rain on every important occasion here this spring, and the dedication ceremony on June 13 for Yale-New Haven Hospital’s new patient care facility was no exception. When it became obvious that the relentless downpour was not about to let up, the gala affair planned for the Harkness lawn was hurriedly moved indoors by a troop of dedicated staff members. The U.S. Coast Guard Band, stranded with bus problems, was replaced at the last minute by the gallant Pressenda String Quartet; balloons meant to float aloft and cameras clicked everywhere, as balloons floated aloft and cameras clicked everywhere.

In his welcoming address to the large audience, C. Newton Schenck, chairman of the Board of Trustees of the Hospital, praised his predecessor, Richard H. Bowerman. “This extraordinary man orchestrated for the Board the development of the new building, in its planning, financing, and the crucial certificate of need.”

The $73 million project, the result of years of planning and three years of construction, replaces outdated facilities of the New Haven Unit with integrated patient care facilities. The new seven-story building which includes an emergency room twice the size of the one in the New Haven Unit, consolidates the departments of radiology and pediatrics, the operating rooms, admitting and discharge offices, and two cafeterias.

“In planning and financing the building, we have had the opportunity to bring together all segments of the community to create something for the benefit of all,” said Mr. Bowerman, who observed that the Hospital had always been “nourished by two streams: University and Community physicians.”

Following remarks by C. Thomas Smith, president of the Hospital, and Paul H. Johnson, chairman of the Hospital Campaign, United States Senator from Connecticut Christopher J. Dodd, delivered the dedication address. “This building is a good example of what Americans can do when the public and private sectors join hands in a common cause,” he said.

“It’s clearly a tribute to the community and I’m proud to represent such people.”

The dedication ceremony was the culmination of a weekend of activities planned in celebration of the new building, including a symposium on ethical issues in medicine. On June 12, nearly 500 employees, staff and friends dined and danced to big band music at the Dedication Dance, sponsored by the Community Associates of Yale-New Haven Hospital.

CONGRATULATIONS!
The Class of 1982

Medical Students

For the first time in many years, rain fell on commencement day this May 24. Even though gloomy skies persisted throughout the day, the scene around Sterling Hall of Medicine was one of pride and joy, as balloons floated aloft and cameras clicked everywhere.

Families and friends of the eighty-eight recipients of the M.D. degree gathered in the Harkness Auditorium where they were welcomed by Dr. Howard Levitin, dean of students. Following the presentation of degrees by Dean Berliner, Dr. Leon E. Rosenberg, C.N.H. Long Professor of Human Genetics, delivered the commencement address, appearing on page 1 of this issue.

Five students received the joint M.D./Ph.D. degree: Jeffrey M. Gimble; Kenneth M. Huttner; Ethan A. Lerner; David B. Menkes, and Lewis P. Rubin. Evangeline R.H. Franklin received a joint M.D./M.P.H. degree.

Following the ceremony, a reception was held in Edward S. Harkness Lounge for the new graduates and their guests.

Epidemiology and Public Health Students

With their building and grounds still in disarray from construction, the Depart-
Yale Medical Faculty Give Virology Workshop in China

At the invitation of the Ministry of Health of the People's Republic of China, Dr. Gueh-Djen Hsiung, professor of laboratory medicine, organized and directed an advanced course in virology in Wuhan, People's Republic of China. The two-week course was held in October at Hubei Medical College, which was co-sponsor of the course with Hunan Medical College (formerly Yale-in-China Medical School), Yale-China Association and the Yale School of Medicine.

Two-Hundred English-speaking Chinese scientists, selected by the sponsors in China, participated in the training workshop of lectures and laboratory exercises prepared by Dr. Hsiung and co-director of the course, Dr. William C. Summers, professor of therapeutic radiology, molecular biophysics and biochemistry and human genetics. Altogether, nine scientists from institutions in the U.S. (including four from Yale) and Canada took part in the program, which resulted from a visit to China in 1980 by the Medical Committee of the Yale-China Association.

During the visit, faculty of the School of Medicine observed medical practice and biomedical research of several of China's leading medical centers. At the conclusion, they and scientists from the host institutions agreed to sponsor a training workshop in medical and experimental virology to provide Chinese scientists with practical experience and the most recent information on virological research.

Since virology has emerged as an important clinical and research discipline only in the last twenty years, during the cultural revolution in China, scientists there have not had access to recent developments in the field. The intensive training workshop organized by Drs. Hsiung and Summers will provide new information and techniques in virology to a nucleus of teachers and research scientists, who in turn, will provide expertise and leadership within the medical institutions of China.

In addition to Dr. Hsiung and Dr. Summers, Yale participants in the course included Dr. Frank J. Bia, assistant professor of internal medicine and laboratory medicine, and Wilma P. Summers, senior research associate in therapeutic radiology.

Promotions to Professor

The following members of the medical faculty were promoted to the rank of professor effective July 1982: Philip W. Askenase, M.D., professor of medicine; Paul G. Barash, M.D., professor of anesthesiology; Paul D. Doolan, M.D., clinical professor of medicine; Maurice J. Mahoney, M.D., professor of human genetics, pediatrics, and obstetrics and gynecology; Paul L. McCarthy, M.D., professor of pediatrics; Bruce M. McDonald, clinical professor of pediatrics; Sreedhar Nair, M.D., clinical professor of medicine; James J. Nordlund, M.D., professor of dermatology; Donald M. Quinlan, Ph.D., professor of psychology in psychiatry; Clarence T. Sasaki, M.D., professor of surgery (otolaryngology); Norman J. Siegel, M.D., professor of pediatrics; Howard W. Smith, M.D., D.M.D., clinical professor of surgery (otolaryngology); Yung H. Son, M.D., professor of therapeutic radiology; Kay Tanaka, M.D., professor of human genetics; David C. Ward, Ph.D., professor of human genetics; Fred S. Wright, M.D., professor of medicine and physiology; Barry L. Zaret, M.D., professor of medicine.

In addition to the above promotions, Mary G.M. Cumen, M.D., Dr. P.H., was appointed clinical professor of epidemiology and pediatrics as of July 1982. Dr. Cumen has been a member of the faculty of the Columbia University School of Public Health since 1973; at Yale she will serve as director of the Connecticut Cancer Epidemiology Unit and will be medical director of the Connecticut Tumor Registry, a unit of the State Health Department.

Joshua Schor Receives 1982 Marguerite Rush Lerner Award

In 1981 Dr. Aaron Lerner and family established the Marguerite Rush Lerner Award to be awarded each year to a medical student who demonstrates outstanding skill in writing and/or performance in a non-scientific vein. Last year the award went to Peter Blier, Leonard Saltz, and Henry Weiner for their delightful skit in the Second Year Show called Dr. Seuss. This year Joshua Schor, class of 1984, was awarded the prize for his poem titled "The Proof of Rain."

Digestive Diseases Division Established

After 27 years as chief of the Gastroenterology Section of the Department of Internal Medicine, Dr. Howard M. Spiro has chosen to set aside his administrative duties and is taking a well-deserved sabbatical leave. The Gastroenterology Section and the Liver Study Unit have now been combined into a single Digestive Diseases Division with Dr. James L. Boyer as chief. Given the distinguished history of both components of the Division, Dr. Boyer plans to have them maintain independent academic identities. Combining the sections, however, will permit a more efficient use of resources and facilities as well as a greater ease of developing new programs.

Faculty Notes

Dr. I. George Miller, whose research on Epstein Barr virus has attracted international recognition, received the 1982 Squibb Award of the Infectious Disease Society. The award, given annually to an investigator 45 years old or younger who has made outstanding contributions to the field, was presented to Dr. Miller by Dr. Dorothy Horstmann. John Rodman Paul Professor Emeritus of Epidemiology and Pediatrics. Dr. Miller was the first to successfully transfact cultured cells with complete EBV-DNA. Most recently he has been able to transfact mouse cells with cloned fragments of the EBV-genome, an approach which has paved the way to mapping several genome functions and opens up the possibility for defining the molecular mechanism of viral transformation and oncogenesis. Dr. Miller is John F. Enders Professor of Pediatric Infectious Disease and Epidemiology.

The College of Physicians and Surgeons of Columbia University presented the 1982 W. Alden Spencer Award to Dr. Patricia Goldman-Rakic, professor of neuroscience. The award, given annually for outstanding contributions to neuroscience, cites her contributions to the understanding of the morphological, biochemical and functional organization of the primate association cortex — that part of the brain essential for memory and cognition. Working with nonhuman primates, Dr. Goldman-Rakic has
pioneered in analyzing the development of the prefrontal cortex.

At its annual meeting in April, the American Physiological Society presented Dean Robert W. Berliner the Ray G. Dags Award. The honor is presented annually in recognition of distinguished service to the Society and to the science of physiology.

Dr. Leon E. Rosenberg, C.N.H. Long Professor and Chairman of the Department of Human Genetics has been elected to the Institute of Medicine. The recipient of numerous honors for his contributions to research in human genetics, Dr. Rosenberg is also recognized as a distinguished clinician and teacher. Election to the Institute of Medicine is both an honor and a working assignment. On appointment, members make a commitment to devote a significant amount of time to serve on committees involved in a broad range of health policy issues.

The 80th Christian A. Herter Lecture was delivered by Dr. Charles Radding in May at New York University School of Medicine. Dr. Radding, professor of human genetics and molecular biophysics and biochemistry, spoke on “The Recombinase Activity of E. coli recA Protein: Synapsis and Strand Transfer.”

The Federation of American Societies for Experimental Biology and The Burroughs Wellcome Fund awarded Dr. Gerhard H. Giebisch a Wellcome Visiting Professorship for the academic year 1982/83. The visiting professorships are offered annually to stimulate discussions with faculty and students at the University of Alabama.

Nine members of the School of Medicine faculty and research staff will share a $175,000 award from the Sweblinus Trust Fund to support research on the causes, therapy and prevention of cancer. They are Drs. Christopher C. Benz, assistant professor of medicine; Robert Gillies, research associate in molecular biology; Edward Hawrot, assistant professor of pharmacology; Ann Korner, research associate in dermatology; R. Michael Liskay, assistant professor of therapeutic radiology; Mark Marsh, research associate in cell biology; Ira S. Mellman, assistant professor of cell biology; Judith White, research associate in cell biology, and Stephen Zuckerman, research associate in human genetics.

Dr. Joan A. Steitz was elected a fellow of the American Academy of Arts and Sciences at the Academy’s 202nd meeting held in Cambridge, Massachusetts in May. Dr. Steitz who is professor of molecular biophysics and biochemistry, has received numerous awards and honors for her research on RNA processing.

Dr. James F. Leckman is one of two scientists to receive fellowships established by The John Merck Fund to encourage research related to certain problems of children and to advance the careers of promising young professionals in the field of child psychiatry. Dr. Leckman is assistant professor of psychiatry and pediatrics, Child Study Center, and associate director of the Children’s Clinical Research Center. His research is directed toward determining the biological and environmental factors involved in the transmission and expression of major developmental and psychiatric disorders in children and adults, as well as the behavioral and developmental correlates of brain metabolism.

Dr. Myron Genel has been awarded a Robert Wood Johnson Health Policy Fellowship for a year of study and congressional work assignment in Washington, D.C. during 1982–83. The fellowships were established in 1974 by the Institute of Medicine with a grant from the Robert Wood Johnson Foundation. The program, conducted in cooperation with the American Political Science Association, is designed to provide a better understanding of major issues in health policy, and a knowledge of how federal health programs are established. The recipients, who are chosen on a competitive basis, are outstanding mid-career professionals working in academic health settings. Dr. Genel, who is professor of pediatrics and program director of the Children’s Clinical Research Center, is the third member of the medical school faculty to be selected; in 1974, Dr. Arthur Viseltear, associate professor of the history of medicine and public health was one of the inaugural Robert Wood Johnson Health Policy Fellows; and in 1976 Samuel Korper, former assistant dean for regional activities was selected as a fellow.

At the annual meeting held in Montreal, Quebec in November, Susan Adiss was elected president of the American Public Health Association. A lecturer in the Department of Epidemiology and Public Health, Ms. Adiss chief of the Connecticut Bureau of Health Planning and Resource Allocation, and is responsible for conducting the state’s health planning activities, including implementing the state health plan.

It was a busy fall for Dr. William F. Collins, Jr., who in September was named Dott Memorial Lecturer at the University of Edinburgh, Scotland, where Dr. Dott was the first professor of neurosurgery. In October, Dr. Collins, who is Harvey and Kate Cushing Professor of Surgery, was the honored guest of the Japan Neurological Society at their 41st annual meeting in Tokyo, following which he was visiting professor at the Hokkaido University School of Medicine in Sapporo, and at the Tohoku Medical School in Sendai, Japan.

At the annual meeting of the New England Surgical Society in October, Dr. William W.L. Glenn was elected president of the Society. Dr. Glenn, who is Charles W. Ose Professor of Surgery, is well-known for his contributions to cardiothoracic surgery.

In September, Dr. Marvin Sears, professor and chairman of the Department of Ophthalmology and Visual Science, joined the ranks of Yale School of Medicine faculty visitors to China. He spent several weeks lecturing at the Peking Medical Association, Shanghai Medical Association, the Peking Capital Hospital of the Chinese Academy of Medical Sciences, and the Nanking Hospital. His lectures covered new findings from automated perimetry, medical therapy, and techniques of surgical and laser treatment in glaucoma, and the pitfalls of medical and surgical treatment.
Dr. Joseph Bertino, professor of medicine and pharmacology, has been named the first editor of the Journal of Clinical Oncology, the official publication of the American Society of Clinical Oncology. Dr. John Marsh, professor of medicine, is an associate editor of the Journal.

The American Medical Writers Association awarded an honorable mention in the “Physicians Category” of the 1982 AMWA Medical Book Awards competition to Endocrinology and Metabolism. The book was co-authored by Dr. Philip Felig, professor of medicine, and Dr. Arthur Brodus, associate professor of medicine, with Dr. John Baxter and Dr. Lawrence Frohman.

The 1982 Seymour L. Lustman Prize for research during the psychiatry residency was presented to Dr. Alan Breier. At the award presentation, Dr. Breier delivered a lecture entitled “Self-Control in Psychotic Disorders.”

**Books by Faculty**


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**Ira Stovin Goldenberg, M.D.**

Dr. Ira S. Goldenberg, professor of surgery, died suddenly on July 31, 1982 at the age of 57.

Dr. Goldenberg was born in Bridgeport, Connecticut. He graduated from the University of Michigan in 1947 and received his M.D. degree from Boston University in 1951, where he was a member of AOA Medical Honor Society.

Dr. Goldenberg served his internship and residency at Yale-New Haven Hospital and was a research fellow in the Department of Surgery during 1952–53. He was appointed a member of the Yale faculty in 1957 and became professor of surgery in 1968. He was an attending surgeon at Yale-New Haven Hospital and a surgical consultant at the West Haven Veterans Hospital and other Connecticut hospitals.

A veteran of World War II, he was a member of numerous professional societies and organizations, including the American College of Surgeons and the American Association of University Surgeons.

Dr. Goldenberg was a leader in the field of breast surgery with a national reputation in treatment of breast cancer. He was a consultant to the National Cancer Institute, serving on the Breast Cancer Task Force. He was one of the pioneering supporters of the Hospice movement in this country, helping to found Connecticut Hospice and serving on its board of directors.

A resident of Orange, his widespread interests included long term service to that town as an influential member of its Library Board and as its Police Department surgeon. Dr. Goldenberg was a noted antique collector and authority, and had attained the presidency of the Connecticut Antique Dealers Association for 1981–82.

Ira Goldenberg was a unique physician and human being. His early interest in breast cancer came at a time when medical science had little to offer in the way of cure or palliation for unfortunate victims of advanced disease. His compassion, empathy, and skill enabled him to bring comfort to thousands of women and endeared him to them and their families. More than a consultant, he was always available when his patients needed him most. His sudden, tragic death has left a void that cannot be easily filled. S.S.M.

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**John Black Goetsch, M.D.**

John Black Goetsch, assistant clinical professor of surgery (urology), was born in Oak Park, Illinois, on April 30, 1914. He died after a happy day of salmon fishing on the Matapedia River in New Brunswick, Canada, on August 8, 1982.

After attending public schools in Oak Park, he earned his B.A. and M.D. degrees at the University of Rochester. He served as a house officer on the surgical and urological services at the Strong Memorial Hospital in Rochester and took a year of training in surgical pathology at the same institution. After World War II service in the 40th Army General Hospital in the European theater, he took his urological residency under Dr. Clyde Deming at the Yale-New Haven Hospital. On completion of that residency, he devoted two years to research at the Yale School of Medicine under the auspices of the Jane Coffin Childs Fund and was awarded membership in Sigma Xi. He was certified by the American Board of Urology in 1948.

Dr. Goetsch entered the private practice of urology in New Haven in 1949 and was continuously actively engaged in it until the time of his death. His interest in research and pathology never dwindled and resulted in the publication of a number of papers both in basic science and clinical experience. He gave generously of his time to the teaching of medical students and house officers and was a faithful attendant at the Yale Urological Tumor Clinic for many years. His patients became his friends and were as devoted to him as he was to them.

Those of us who linger briefly behind will never forget his kind, gentle nature and his warm, friendly smile. We are all diminished by this loss. R.R.B.

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**Elmer V. Newton**

Elmer V. Newton, who had worked at the School of Medicine for 26 years and was well known to the students during this period, died on June 5, 1982.

After having worked for many years for the New Haven Railroad, Mr. Newton was employed by Yale in 1956 as an assistant in research in the Depart-
Why a Gift to "Endowment"?

"... Kissing your hand may make you feel very good but a diamond ... lasts forever." So, too, does a gift to the Yale Medical School Alumni Fund Endowment. "Endowment" to many of us spells permanence, "a gift in perpetuity", "a gift that keeps on giving" — those are what a gift to "Endowment" is all about.

It is the permanence of a gift to Endowment that appeals to so many of those whose circumstances permit them to consider making a substantial gift. Unlike the Parisian's kiss, it is not for the moment. Year after year after year the income it generates will help to maintain the School's quality.

The "giving" also has permanence. Like "The Brook" of Alfred Lord Tennyson, it will "go on forever". The total amount of a donor's gift to Endowment is credited in his or her name and class in the year it is received and its income will be similarly credited each year thereafter. It is impossible to know how much this way of recognizing a donor's gift to Endowment may influence the donor's decision to make a contribution. But is it not true that there is more than a little of "... this pleasing hope, this fond desire, this longing after immortality" deep in many of us?

To consider permanence a major reason for a decision to make a gift to Endowment would seem to be a justifiable conjecture, but there are usually — probably always — other telling reasons. For example, the fact that the allocation of the income from the gift will be reconsidered annually appeals to many donors. Each year the Dean and his advisors assign the income from the Alumni Fund Endowment to that area they believe deserves the highest priority. In recent years, because of the rapid, extensive rise in tuition (it will be $8,750 next year!) it has gone into scholarship aid.

Other donors like the variety of ways a major gift can be made to Endowment. For one, a Life Income gift best fits his or her circumstances; for another a Deferred Annuity gift, a Bequest, a Capital gift or a gift of a Life Insurance policy whose protection is no longer required will be appealing and appropriate.

The fact that the gift's capital is managed so as to compensate for attrition by inflation must impress every prospective donor; no one likes the thought that a gift's real value will gradually (these days rapidly) diminish. To counteract this the Fund adds a fraction of each year's income to the capital amount of the original gift.

These brief speculations of why alumni and alumni choose to make gifts to Endowment suggest another fundamental question: why does a graduate desire to make a substantial gift? Like many basic ones — there is no single, definitive answer.

You, no doubt, have thought of more than one reason. There are many: "divers dive for diverse reasons" — and so do people who give. Some of the reasons are homely, familiar; others, equally valid, may be obscure. It's a wise donor who knows his own motives.

Warm feelings, fostered by happy memories of his or her own School experiences, of one or more teacher's encouragement, inspiration or friendliness, must be high on everyone's list of reasons. An uncomplicated, simple feeling of obligation to repay the School for at least the difference between the tuition paid and the amount his or her education cost the School is another. Or a mix of empathy with succeeding generations of students and the memory of one's own struggle may serve to breed a desire to make these younger people's journey as beneficial as — and less grueling than — the donor's.

Then there are the complex, more intimate reasons: the need further to feed a still hungry ego, or to bolster a still less than solid identity. Not all the processes of adolescence reach their destinations before the thirties!

And, often intertwined with one or more of those, is a reason that might better have been mentioned first: the fact that many donors previously had learned that giving is a rewarding experience, that it is "... more blessed to give than to receive" and frequently more satisfying.

Ros Gallagher, Chairman
Sam Kushlan, Co-Chairman
Yale Medical School
Bequest and Endowment Program
The Alumni in Medicine Column

Notes from the President

Nicholas P.R. Spinelli, M.D.

A strange and unprecedented monsoon drenched the festivities at the Yale Medical Alumni Day this past June 5th. Fourteen inches of rain, a record, fell on reunion Saturday. This did not discourage a banner number of attendees from assembling to register in the Cedar Street rotunda that morning. With the muffled hum of the downpour as background, the dripping forms of the drenched arrivals, umbrellas useless, entered the loud and animated murmur of a happy, warm crowd. A turn-away audience heard an upbeat address by our dynamic University President Giamatti on Saturday morning.

The adverse performance of the elements seemed to kindle a particular and undeniable enthusiasm for all components of the day’s program (dampened attractions of the Yale golf course or the trip to the British Museum undoubtedly contributed.) The unanimous consensus was that this had been one of the finest reunions within memory.

Everyone seemed to get to know and converse with the spirited and spiritually youthful members of the 50th reunion class at the several common social events. It was especially pleasing to see this group communicating the fascinating history and details of their distinguished medical careers of a half century with a group of young Yale medical students. Many among the 50th reunion group enjoyed this dialogue. (i.e. Farr, Clarke, Lam, Wegman, Humphreys et al.) Less visible because they were cloistered in their own special 25th reunion year program was the group led by Jack Levin and Gil Hogan. ’57. They felt that every quarter century reunion class should do a similar type of program. The 10th year class, ’72, under the energetic direction of Harry Malech assembled an enthusiastic group of returners. These “college kids of the late sixties” displayed no visible scars of their supposedly stressful academic times.

The voices of the alumni body this past June could be heard with a seeming common enthusiasm: “more programmed, structured reunions . . .” Levin, ’57: “more attention to senior class reunion entertainment . . .” Ogilvie ’34/Pickett ’44: “how can we get to know Yale medical alumni in the real world?” Gwin ’84/Fish ’85: “are there ways the many Yale Med/EPH grads in Washington, D. C. area could be gotten together?” Muriel Wolf ’59.

In these times when a process of societal alienation is described by the sociologists, perhaps we are returning to the traditional doorways of communication which school reunions provide. Reunion year 1982 was, in an interesting and declarative sense, a communication, reconnection, communion event if the feedback can be interpreted. Perhaps it wasn’t the rain alone that nurtured the roots of the group’s return to its past. Achieving the social intimacy among generations which we realized during this past reunion is always subconsciously a sought after goal. The challenge in future programming will be to structure events attractive enough to lure us to participate, in the absence of rain. In any event, the purpose of this reminiscence is to convey the consequent stirrings at alumni headquarters this summer and to report:

Len Kemler, ’42, volunteered to be chairman of the Program Committee again, for 1983, and assembled a core group this summer to begin planning. Jack Ogilvie and Larry Pickett co-chair a committee to plan a special program of entertainment and activities for the 50th reunion group in 1983.

Plans are underway for publication of a Yale Medical Alumni Directory. In responding to requests for information for this endeavor, we hope you all will participate enthusiastically in an effort which may provide you with useful information. Whether there are alumni who would be interested in a preceptor role for the rare Yale student interested in a tutorial experience, in the New Haven or Connecticut area or in distant hometown cities (“an orthopod in Chicago . . . a cardiologist in Denver?”), is a question which a directory would help answer. With such a resource the possibilities for those so inclined to achieve regional linkages within the Yale context are clear.

The alumni/ae organization — a many-headed organism — can demonstrate dynamism, like any organism. We hope that this year’s energy endures and flourishes and that next year’s reunion will bring even more pleasure to returning alumni/ae than did this year’s. It was in every way a model experience worth repetition.

Alumni Weekend

Soaked but Successful

From the middle of May through the first two weeks of June, New Haven experienced an uninterrupted series of rainy weekends; however, the worst by far, was the torrential downpour on Saturday of the Medical Alumni Weekend. Heavy rains which began in the early morning hours continued throughout the day. By mid-afternoon, streets in West Haven, Hamden, and other neighboring towns were flooded, and many major highways were impassable. It was one of the worst rainstorms to visit the area in many years.

In spite of the weather, the Medical Alumni Weekend was very successful, and the attendance set a new record. Although the official registration was 336, it is estimated that about 400 attendees the events on Friday and Saturday. In addition, some of the five-year reunion class members who were unable to attend the events at the School were present at the class dinners on Saturday evening.

An innovation this year was the Dean’s reception on Friday afternoon. Held in the Beaumont Room, it provided a pleasant setting for friends and former classmates to meet, and the presence of several faculty and some medical students enabled returning alumni to hear about current events at the School. It was apparent that many of the alumni present at the reception were especially pleased to have an opportunity to chat with some of the medical students.

The alumni were honored to hear President Giamatti speak on “Yale Today.” His talk given in the Historical Library on Saturday morning drew an extremely large crowd; it was standing room only, and several people were barely able to squeeze into the back of the room. The seminars which followed on Saturday also attracted considerable interest.

As always, the buffet luncheon at
Edward S. Harkness Hall was a pleasant occasion and attracted a large turnout. Many who were present at the Medical Alumni Weekend commented: “It was the best yet!”

**Association of Yale Alumni in Medicine**

**Annual Business Meeting on**

**June 5, 1982**

The meeting held in Mary S. Harkness Auditorium was chaired by Dr. Nicholas Spinelli, president. Returning alumni were welcomed by Dean Berliner, and special greetings were extended to the reunion classes. Members of the class of 1932 celebrating their 50th reunion were introduced by Dr. Spinelli. He also introduced those present who had graduated prior to 1932: Helen Langner ('22), Myron Sallick ('24), Max Alpert ('28), Russell Scobie ('29), James Hart ('30), and Paul Lavietes ('30).

On recommendation of the Nominating Committee, the following were elected to serve on the Association’s Executive Committee, each for a term of two years: Gilbert Hogan ('57), R. Leonard Kemler ('43), Richard Norton ('60 HS), O’Dell Owens ('76), Rebecca Solomon ('39).

Alumni elected to serve as representatives to the Association of Yale Alumni (AYA) were: A. Frederick North ('56), Daniel Passeri ('75), Muriel Wolf ('59).

Following the elections, Dr. Spinelli congratulated those newly elected and expressed appreciation to the two outgoing members of the Executive Committee, Sarah Auchtinloss ('76) and William Waskowitz ('57), both having loyally served for two-year terms. He also expressed appreciation to those who had completed terms as medical and public health representatives to the AYA, Victor Crown (MPH '69) and Harris Pastides (Ph.D. '80).

The next item of business was the report of the chairman of the Medical School Alumni Fund, Dr. Lowell Goodman. He noted that the total raised by the 1981-82 campaign was expected to exceed $225,000 and would establish a new record in annual giving. The important influence of Dr. Leona Baumgartner’s challenge gift of matching funds was noted. Following Dr. Goodman’s report, the following motion from the audience was voted unanimously: “In recognition of her extreme generosity, the Association of Yale Alumni in Medicine, at their Annual Meeting, express, record and communicate their sincere appreciation to Leona Baumgartner.”

Mrs. Kathleen Howe reported on the Public Health Alumni Fund, which also established a new record in the total amount of annual gifts. Mrs. Howe stated that this year all Public Health Alumni contributions will be used to establish the Robert W. McCollum Fund for Student Aid, to honor the former chairman of Epidemiology and Public Health.

There being no other business, Dr. Spinelli adjourned the meeting after announcing that the dates of the 1983 Alumni Weekend would be June 3 and 4.

**REUNIONS**

**1932 — Fiftieth**

*By Clement Clarke and Myron Wegman*

The 50th reunion of Yale Med ’32 was marred by what is said to have been the worst rainstorm in the history of New Haven, with resulting serious floods. Cushing, coming up from New York was almost three hours getting from Bridgeport to New Haven and to the Graduates Club. Wehger, coming from Bridgeport had to go by a very roundabout route taking an hour longer than usual. Clarke, who had organized the dinner, never made it all because his car got into the water on the way in. He and his wife had to be rescued and spent most of the night in Peppino’s Clam Bar before being taken home about five in the morning by a high-rise Coast Guard truck equipped with inflatable lifeboat and outboard just in case. After the dinner Wegman took the watery Whalley Avenue route to Southbury, swamped his rental car, waded to the rescue car of a female police officer and spent the night in the National Guard Armory on Goffe Street.

The warmth of the meeting and the fellowship among the eight persons, four wives and one son who did get to the dinner, made up to some extent for the difficulties. Those who attended were: Bob and Robin Cushing, Frank and Shirley Carroll, Joe and Monica Donnelly, Lee Farr, Storer Humphries, Connie Lam, Dutch Wehger and his son, Roland, and Myron Wegman.

**1937 — Forty-fifth**

*By Wilbur Johnston*

The class of 1937 did not have a formal reunion this year. Two letters were sent out by Wilbur Johnston to have a get-together, but there was no positive response from our members.

Several messages and phone calls were received. Dennie Pratt called from Mt. Pleasant, South Carolina to report all was well. Also heard from were Al Spicer from Weekapaug, Rhode Island; Crosby Greene, from Baltimore, Maryland; Morgan Sargent, Quincy, Massachusetts; and Lucille Wiepert of Avon, Connecticut. All expressed a desire to wait for the fiftieth and hoped for fewer weddings and other competitive reunions.

Of course the ten inches of rain on Saturday, June 5th, established a record and was not helpful for those alumni attending the several arranged functions.

**1942 Med.**

No report received.

**1947 — Thirty-fifth**

*By Philip Philbin*

Fifteen members of the class of 1947, about one-fourth, made it to the 35th for a most pleasant reunion.

Despite record rains, there was little that dampened the pleasure of seeing familiar faces after so many years and hearing brief sketches of their activities. There were many laughs, some poignant memories, all enjoyable. There was correspondence from Barnes and Bowers which added to the evening.

Blansfield, Cannon, Chase, Colwell, Collins, Greg, Epstein, Friedlander, Kerin, Mache, Maniatis, McClelland, Newton, Tamm, and myself made it to our reunion headquarters at the New Haven Medical Society Building despite the downpour, where we had drinks and a delightful dinner. This was the climax
to a very busy and educational day at the school and was arranged with due appreciation by Drs. Maniatis and Newton.

The only disappointment was that of noting the absence of many of the class, all just a few hours from New Haven, particularly after seeing the large number traveling many miles to make it.

Let’s do it better in 1987, our 40th.

George Barnes, Jr., in honor of his special contributions to the medical profession, selected for fellowship in the American College of Radiology, received his award at its annual meeting in September. Dr. Barnes resides in Gig Harbor, Washington and is affiliated with St. Joseph and Tacoma General Hospitals in Tacoma.

1952 — Thirtieth

By Harvey Young

Sterling Characters Have Great 30th!

With another issue of the class newsletter and photographs of reunions past, six members of the class of ’52 and their guests enjoyed a fine evening of reminiscing and dinner at the Graduate Club on June 5th.

Mo Bogdonoff provided a most entertaining and truly enjoyable review of thirty years and a peek into the future. Ray Duff, although unable to attend, was present in that he arranged the evening’s location and the excellent meal.

Those attending the reunion were: Mo Bogdonoff, Bob and Maggie Gerety, Art and Katie Hustead, Bill Klatchkos, Don and Judy Schultz, Hilda and Harvey Young.

Several were unable to attend because of conflicts with graduations of their offspring, and Jose Patino wrote that he was traveling and unable to put New Haven on his itinerary.

1957 — Twenty-Fifth

By Jack Levin

Undaunted by the seven inches of rain which fell on New Haven on the Saturday of Reunion Weekend, 34 members of our class (most of them accompanied by their wives) celebrated our 25th Reunion. Amazingly, the same number of our class (43%) attended the 20th Reunion. Those who travelled the farthest were Al Chun-Hoon (from Honolulu), Jack Levin (from San Francisco), and Dave Martin (from Wabasha, Minnesota).

Following the program presented by the School of Medicine on Saturday morning and lunch, 1957 Medicine held a Non-Scientific Mini-Symposium. The speakers and topics were: Cliff Reifler (Going to College and Letting Go: Problems of Transition); Stan Kilty (From Private Practice to Organized Health Service Delivery); Howie Minners (Man in Space); and Tom Danaher (Experiences in Afghanistan). Then it was through the storm and down flooded roads to the shore and the Pine Orchard home of the family of Gil and Carol Hogan (This was not the first time that Carol’s mother, Mrs. Donovan, had offered the hospitality of her home to members of our class). The unending rain did not prevent us from enjoying cocktails, dinner, and much good conversation. Fortunately, the weather did not deter members of the Connecticut contingent from arriving as the evening progressed. Some of our Connecticut classmates stopped the dinner party from turning into a pajama party by guiding car caravans out of Pine Orchard onto relatively clear roads.

Members of the class who attended the reunion were: Vince and Doria Andriole, Cal and Phyllis Bigler, Jack and Barbara Blechner, Harry and Joann Briggs, Jack and Ann Carey, Al and Myrna Chun-Hoon, Lou and Matty Cooper, Tom and Nancy Danaher, Joe Demis, Jim and Colleen Dorr, Ed Eyerman, Hal and Jo Fallon, Bob Fishbein, Ron and Estelle Fishbein, Tony and Mary Fons, Elizabeth and Ben Forsyth, Joyce and Bill Gryboski, Gil and Carol Hogan, Stan and Carol Kilty, Bill and Priscilla Kissick, Willard and Bea Krehl, Ed and Naomi Levin, Jack Levin, David Martin, Howie and Gretchen Minners, Hugh Moffet, Herb and Ann Newman, Joe and Nancy Pagano, Ray Phillips, Cliff and Barbara Reifler, Don and Amy Stahl, Arthur and Sheila Taub, and Bill and Barbara Waskowitz. Joe Amenta was suitably represented by his wife, Madilon.

The reunion was organized by Jack Levin, Gil and Carol Hogan, Ron Fishbein, Howie Minners, and Bill Waskowitz. Particular thanks go to Gil and Carol for hosting the class dinner and to Howie for the enormous effort required for the preparation of the superb collection of biographic information. Bob Fishbein enjoyed himself sufficiently to be inspired to compose “The Anatomy of Alumni Day.”

Finally and importantly, due in large part to the efforts of our recent Class Agent, Bill Waskowitz, 78% of our class have contributed over $9,000 to the Medical School Alumni Fund during our 25th reunion year. This is the highest level of participation and the greatest amount of money donated in the history of our class. I think we should attempt to achieve 100% participation on the occasion of our 30th reunion.

Editor’s note:

The following by Robert Fishbein is being included at his special request. In a recent letter he noted that this “is not a poem, but a rambling essay” and explained its origin as follows: “The idea was conceived as we all sat in the Anatomy Lecture Room after classmates Howie Minners, Cliff Reifler, Stan Kilty, and Tom Danaher had presented interesting experiences in their quartered century since we were ordained medical ministers. Gil Hogan proceeded to explain . . . with chalk drawn map . . . directions to the evening dinner at Mrs. Donovan’s house . . . and his rapid delivery (as everybody was taking notes) took me back — in a flash — to the labyrinth of anatomical quicksand when it was only the reassurance of Drs. Forbes, Crelin, and Gardner that I would survive in that jungle of knowledge . . . .”
The Anatomy of Alumni Day

"A Prosector's Prose . . . For The Archives Of Posterity"

It Was The Day Of Assault As We All
Aluminumized To Recall And Recollect
From The Point Of Our M. Deed . . . A
Quarter Of A Century Ago . . . .

With Casted Characters And Characteristics
We Gathered . . . Having Been Scattered Hither
And Yonder . . . The Magnet Of Tradition
Brought From As West As Hawaii, As South
As Carolina, As North As Vermont, And
Ironed The Filings In Between. Haven We
Came. So Did The Rain . . . .

Gil, Not To Be Confused With The Breathing
Apparatus Of Fish, Helped Us Snorkel To The
Donovan . . . Under Trestles And Over Puddles . . .
Hydrofoil Style. We Were Hogan's Heroes,
Sandwiched Between The Rain Drops.

The Lord Had Taken An Overdose Of Diuretics.
Clouds Were Emptying Their Bladders. Was
This A Eulogy To Urology? Did The
Almighty Need A New Plumber? Heaven Only
Knows . . . .

The Road Map From Cedar Street Took Me
Back To The Labyrinth Of The Brachial Plexus . . .
With All Its Turns And Twists . . . As Gil Said
"Cervical One Across The Oak Street Connector
From Behind C2 Getting On To The Ulnar
Branch Going Distal To The Dorsum Of The
Quinnipiac Bridge . . . Take The Left Fork
In The Artery Under The Railroad Trestle
Down Frontage Supine . . . This Is Sort Of Like
An Elbow Joint. Past This Antecubital Fossa
Follow The Flexor Muscles Along The Brachial
Vein . . . This Route Is Won! Now Over The
Branford Hill And Under The Carpal Tunnel . . .
The Right Fork Is Meta To The Carpal And
146 Degrees In Flexion To The Position Of
Function. Get A Good Grip On The Steering
Wheel And Keep Making Right Turns On
Those Radial Tires Till You See An Arm . . . Or . . . Ry
Of Pines In An Orchard. At The Intersection
Of The Recurrent Branch Of The Radial Nerve
And The Thenar Eminence Is Lake Place. This
Arbitrary Tributary Runs Into The Sesamoid
Known As Bony Island View Avenue.
The Reunion Is At The Third Digit Of
The Palm. That Is The Donovan."

"Good Turtle-ing," Said Gil Taking A Deep Breath
Before Submerging.

We Broke Ranks, Embarked, Drived, Derived,
And Arrived. We Had Swum Under The
Flood.

This Was A Breeze, Compared To National Boards.

From The Reign
Of Aqua Haven
On
YALE ALUMNI DAY

1962 — Twentieth

By Michael Alderman

The class of 1962, at graduation some
75 strong, met in 20th reunion this past
June. Consistent with the high spirit,
the sense of camaraderie and the strong
commitment to the Yale Medical
School that has always characterized
this group, attendance was high.
Indeed, at the climactic weekend event
— dinner at Mory's on Saturday night
— a record 21 class members were on
hand. They came from literally all over
the country, with Paul Ackerman
from Southern California taking the
distance traveled award. Bill Miller
from Savannah, Georgia was not too
far behind. Mickey Alderman, Ollie
Dann, Dick Collins, Arnie Eisenfeld,
Bruce Elenheim, Joe Ferrone, John
German, John Godley, John
Hageman, Frank Hartman, Gary
Jacobson, Dave Knopp, Carter
Marshall, Malcolm Martin, Stan
Matyszewski, Dave McConnell, Dick
Pschirrer, Dave Seil, and Jim
Spencer completed the group. The
actual number of celebrants was
swelled to 34 by the presence of 12
spouses and one McConnell son. Word
was also received from Walt Karney
from the Walter Reed Medical Center
in Bethesda where he is Chief of
Nephrology.

Following an extended cocktail
hour, and satisfying dinner, some
semi-serious time was devoted to
recounting recent past and present
activities, as well as conjectures upon
the future and observations about
medicine and life in general. Many
seem to have followed a sometimes
unexpected, but nevertheless interesting
and exciting path so far. Perhaps not
unexpectedly, the practitioners (a
majority) view those in full time situa¬
tions with some envy — and vice
versa. There was little apparent desire,
however, on the part of either group to
switch. Before venturing out onto New
Haven streets, awash after torrential
rains, all agreed it had been a memorable
evening, thanks to arrangements by the
Pschirrs, that should be repeated — if
possible before the 25th and with even a
larger turnout.

Manuel Lipson, executive director of
Massachusetts Rehabilitation Hospital
in Boston and assistant clinical profes¬
sor of medicine at Harvard, has been
appointed an institutional member of the Interhospital Coordinating Committee on Rehabilitation at Harvard Medical School. The Committee, charged with formulating institutional arrangements for support of programs, development of resources, and planning the governance of a Harvard Medical School system initiative in rehabilitation medicine, will also work to assemble the Division of Rehabilitation Medicine as an academic administrative unit of the Faculty of Medicine.

1967 — Fifteenth
By Robert Kirkwood

Our fifteenth reunion began with a relaxed evening of cocktails and dinner at the country ‘estate’ of Martin and Karen Wand in Avon, Connecticut. While little Wands ran around keeping us well served, Mary Williams Clark showed slides of the old Yale days, including our senior play, ‘Iatrogenic.’ We could recognize most people as we relived Larry Henry playing the ‘hyper-tern’, Korobkin acting as the appropriately suave and tactful surgeon explaining cancer to Rigney, the emaciated patient; Hart, pipe in mouth, playing Dr. Freedman; and the Barber Shop quartet of Strohl, Crumley, Rosser and Kirkwood. We found most of us have not changed much in appearance through the fifteen-year turbulent passage and the decade of the seventies, although in many cases our lives surely have.

The weekend of June 4th brought much to southern New England, and many of our classmates were unable to attend the celebration. The outdoor party at #1 South Street was cancelled. The dormitory looked much the same, although locks and TV surveillance cameras spoke of new times. The Medical Center was bursting with construction of tall and imposing laboratories, and the neogothic Catholic church had given way to the change. A large parking lot now covers the still unfinished connector. Yale is still vital and growing.

Many of us did make it through the fender-deep water to Guilford and the Sachem House for dinner. We heard about each other’s lives, and talked and laughed about the Friday night parties we used to have with Manuel, followed by the next morning brain cuttings that cleared the sinuses. We remembered Liebow’s honed lectures with slides deftly, and sometimes not so deftly, handled by the terrified pathology resident. We remembered the aura around the farewell talk of Paul Beeson, and felt proud to be from Yale. It felt good to be filled with the warmth of our renewed friendships. We missed those who could not be with us, and we paused in silence to remember our deceased colleagues. Barry MacAnally, Mike Lindsley, Alan Circle and Larry Henry.

Our classmates who attended were Mary Williams Clark, Jim Dowaliby, John Drews, Dick Hart, Peter Herbert, Bob Kirkwood, Mel Korobkin, Tony Lovell, Laura Manueledis, John Pastore, Brian Rigney, Joe Sabbatino, Helen Smits, Martin Wand, Bob Young, and Pete Zeman.

Space in this journal is limited, and I will send a more lengthy newsletter soon that shares news that I received this year.

1972 — Tenth
By Harry Malech

The Yale University School of Medicine class of 1972 celebrated its 10-year reunion with a dinner at The Chart House restaurant on Saturday, June 5, 1982. The Chart House is on the waterfront and the deluge of rain on the windows and over the water added to the effect of being on a boat in the harbor. Though it wasn’t apparent until the next day, this rainstorm resulted in some of the worst flooding in Connecticut in several decades. I assume that all the dinner attendees got home ok.

The group was large enough that we were able to discuss the current activities of all members of our class except for a very few individuals. Several people brought their children, and most came with spouses which I think added greatly to the feeling that this was a comfortable gathering of old friends. Members of our class who attended were: Bruce Haak, John Foster, Peter Panzarino, Thomas Horn, John Fulkerson, Felix Freshwater, Robert DeBlasi, Jesse Jupiter, Philip Lebowitz, Philip Rothfeld, Michael Charney, Daniel Begel, Gary Strauss, Paul Lucky, and Harry Malech.

1977 — Fifth
No report received.

IN MEMORIAM

Walter C. Tilden
May 7, 1982
M.D. ’12

William Y. Sayad
March 16, 1982
M.D. ’21

Hyman W. Weinstein
April 14, 1982
M.D. ’23

Edward M. Gould
July 16, 1982
M.D. ’24

Jacques D. Soifer
September 2, 1982
M.D. ’24

William H. Hahn
June 3, 1982
M.D. ’26

Edith N. Stainsby
March, 1979
M.D. ’26

William H. Veale
July 17, 1982
ex med ’26

Mary B. Harris Michal
February 28, 1979
M.D. ’28

Harry C. Oard
March 12, 1982
M.D. ’28

Benjamin Castleman
June 29, 1982
M.D. ’31

DeWitt Dominick
May 20, 1982
M.D. ’34

Daniel M. Killoran
May 30, 1980
M.D. ’34

Marguerite Booth
March 28, 1979
M.D. ’35

Paul H. Twaddle
February 14, 1982
M.D. ’35

Maurice A. de Harne,
August 24, 1982
M.D. ’36

ex med ’35

Hannibal Hamlin
June 28, 1982
M.D. ’36

Chester H. Tidings
October 12, 1981
ex ph ’39

Jackson H. Stuckey
September 16, 1982
M.D. ’42

M.P.H. ’42

Spillane
(Date Unknown)

B. Allen Richardson
December 30, 1981
M.D. ’43

Mrs. Alice L. Edwards
February 13, 1982
M.P.H. ’66

Lillian Welch
1981-1982 Medical School Alumni Fund Campaign

Message from the Medical School Alumni Fund Chairman

I am delighted to report that the 1981–82 Medical School Alumni Fund surpassed its previous record-breaking year by 39%, with a grand total of $296,729!

Leona Baumgartner ’32 Ph.D., ’34 M.D. provided the School and the Department of Epidemiology and Public Health with a $75,000 challenge award for new and increased gifts which enabled the Fund to raise additional money for student financial aid. This welcomed incentive from one of our own graduates could very well be the start of an important precedent.

I want to thank all the alumni, former House Staff, parents and friends who responded so thoughtfully to our campaign; sincere thanks also to the volunteers who continue to provide the momentum that keeps our Fund growing at such a superb rate; and a very special acknowledgment to those volunteers who assisted the reunion Class Agents. This special effort contributed significantly to our excellent giving record during the past year.

My first year as Chairman has been particularly interesting and very gratifying. I want to share with you several paragraphs written by one of our Class Agents that best describes my own feelings about Yale and fund raising:

"The job of a fund raiser is at times rewarding; at other times almost fun, but most of the time extremely frustrating. I am impressed with the apathy toward the Medical School and its efforts to provide a quality of education to those who need funds. The Yale Medical School Alumni Fund really should be one of the top priorities on the list of my classmates. I learned many, many years ago when I graduated from high school, when in the commencement address, it was noted that ‘With privilege goes responsibility.’ I am afraid that there are too many of us, who forget this — like it or not. It is a privilege to be a physician; it is not a right. For all of the complaining and moaning that we physicians do at times, I think that the bottom line is that most of us are happy in our work, doing what we want to do, are respected in our profession and financially rewarded more than is adequate.

I personally feel that giving financial help to the Medical School Alumni Fund is a small way of showing that we care, are grateful.”

I appreciate your past support to look forward to another successful year.

Lowell I. Goodman ’51 Chairman

A Message from the Dean

This past year the Medical School Alumni Fund established a remarkable new record with contributions totalling $296,729. This surpasses the previous year — also a record breaker — by 39%. Such manifestation of loyalty and support is extremely encouraging.

As in previous years, your Medical School Alumni Fund contributions will be used to provide additional student loans. Money for student financial aid continues to be one of the School’s greatest needs. This need was recognized by Leona Baumgartner in establishing her $75,000 challenge grant to match new and increased gifts. We are especially grateful to her for providing this incentive.

In addition to thanking those who have contributed to the Fund, I want to congratulate Lowell Goodman and all of those who worked with him to achieve these impressive results. Your continued support is greatly appreciated.

Robert W. Berliner

Message to Public Health Graduates

The incentive of the Leona Baumgartner Challenge Fund; the honoring of retiring Chairman Robert W. McCollum by committing the proceeds of the 1981–82 drive to a fund bearing his name and the efforts and generosity of many people, all combined to make this a banner year for Epidemiology and Public Health. A new record was established when 139% of the goal was achieved and a total of $48,799 raised to be used for student revolving loans.

This level of giving reflects an awareness of and sensitivity to the tremendous financial demands on the student of today and presents the alumni/ae with the further challenge of maintaining it.

Colin White
Kathleen Howe
Samuel B. Webb, Jr.

Fund Officers 1981–82

Medical School Alumni Fund
Lowell I. Goodman ’51, Chairman
Malvin F. White ’39, Vice Chairman
William K. McClelland ’47, Vice Chairman
John L. Cieply ’71, Vice Chairman
J. Roswell Gallagher ’30, Bequest & Endowment Co-Chairman
Samuel D. Kushlan ’35, Bequest & Endowment Co-Chairman

Epidemiology and Public Health Alumni Fund
Kathleen H. Howe ’56, Co-Chairman
Samuel B. Webb, Jr. ’63, Co-Chairman
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<td>1908–21</td>
<td></td>
<td>$288</td>
<td>45%</td>
<td>$7,758</td>
<td>56%</td>
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<td>1922</td>
<td>Edward T. Wakeman</td>
<td>275</td>
<td>60%</td>
<td>760</td>
<td>71%</td>
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<td>1923</td>
<td>William Cohen</td>
<td>5,625</td>
<td>75%</td>
<td>2,195</td>
<td>63%</td>
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<td>1924</td>
<td>Myron A. Sallick</td>
<td>975</td>
<td>68%</td>
<td>945</td>
<td>73%</td>
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<td>1926</td>
<td>Max Alpert</td>
<td>1,523</td>
<td>42%</td>
<td>521</td>
<td>58%</td>
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<td>1927</td>
<td>Henry Irwin Fineberg</td>
<td>1,161</td>
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<td>1,104</td>
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<td>1928</td>
<td>Max Alpert</td>
<td>2,441</td>
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<td>2,297</td>
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<td>Paul F. McAlenney</td>
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<td>5,343</td>
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<td>1931</td>
<td>Michael D’Amico</td>
<td>2,075</td>
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<td>1,687</td>
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<td>1932</td>
<td>Storer P. Humphreys</td>
<td>1,024</td>
<td>55%</td>
<td>4,384</td>
<td>64%</td>
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<td>1933</td>
<td>Frederick Wies</td>
<td>4,198</td>
<td>55%</td>
<td>2,133</td>
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<td>1934</td>
<td>Franklin M. Foote</td>
<td>2,211</td>
<td>64%</td>
<td>2,333</td>
<td>72%</td>
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<td>1935</td>
<td>DeWitt Dominick</td>
<td>1,620</td>
<td>54%</td>
<td>2,977</td>
<td>52%</td>
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<td>1936</td>
<td>Hannibal Hamlin</td>
<td>3,319</td>
<td>43%</td>
<td>2,671</td>
<td>44%</td>
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<td>1937</td>
<td>David Dolowitz</td>
<td>1,767</td>
<td>49%</td>
<td>*16,672</td>
<td>55%</td>
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<td>1938</td>
<td>Nelson Ordway</td>
<td>1,986</td>
<td>60%</td>
<td>1,095</td>
<td>52%</td>
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<td>1939</td>
<td>Robert Ernst</td>
<td>1,855</td>
<td>38%</td>
<td>1,795</td>
<td>53%</td>
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<td>1940</td>
<td>Rebecca Z. Solomon</td>
<td>5,355</td>
<td>64%</td>
<td>2,555</td>
<td>64%</td>
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<td>1941</td>
<td>James F. Ferguson</td>
<td>1,785</td>
<td>61%</td>
<td>2,260</td>
<td>100%</td>
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<td>1942</td>
<td>Charles B. Cheney</td>
<td>11,679</td>
<td>53%</td>
<td>16,672</td>
<td>55%</td>
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<td>1943A</td>
<td>Jonathan Laman</td>
<td>2,030</td>
<td>54%</td>
<td>2,070</td>
<td>54%</td>
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<td>B</td>
<td>S. Brownlee Brinkley</td>
<td>1,242</td>
<td>43%</td>
<td>2,027</td>
<td>52%</td>
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<td>1944</td>
<td>Nicholas P. R. Spinelli</td>
<td>4,188</td>
<td>55%</td>
<td>4,615</td>
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<td>1945</td>
<td>Richard W. Breck</td>
<td>3,260</td>
<td>69%</td>
<td>3,359</td>
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<td>1946</td>
<td>Julian A. Sachs</td>
<td>*8,830</td>
<td>66%</td>
<td>6,542</td>
<td>49%</td>
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<td>1947</td>
<td>William Roy Breg</td>
<td>3,165</td>
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<td>*6,142</td>
<td>68%</td>
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<td>1948</td>
<td>Paul Kochler</td>
<td>3,480</td>
<td>60%</td>
<td>3,905</td>
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<td>1949</td>
<td>Daniel Elliott</td>
<td>2,945</td>
<td>48%</td>
<td>5,516</td>
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<td>1950</td>
<td>David Frucht</td>
<td>1,661</td>
<td>32%</td>
<td>2,813</td>
<td>56%</td>
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<tr>
<td>1951</td>
<td>Lowell J. Goodman</td>
<td>*4,520</td>
<td>100%</td>
<td>5,275</td>
<td>52%</td>
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<td>1952</td>
<td>Harvey L. Young</td>
<td>3,102</td>
<td>38%</td>
<td>*4,873</td>
<td>49%</td>
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<td>1953</td>
<td>Vincent Lynn Gott</td>
<td>3,445</td>
<td>49%</td>
<td>3,908</td>
<td>47%</td>
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<td>1954</td>
<td>John K. Rose</td>
<td>2,616</td>
<td>45%</td>
<td>5,267</td>
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<td>1955</td>
<td>Robert A. Kramer</td>
<td>2,240</td>
<td>62%</td>
<td>4,443</td>
<td>52%</td>
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<td>1956</td>
<td>John H. Gardner III</td>
<td>*14,930</td>
<td>63%</td>
<td>4,070</td>
<td>33%</td>
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<td>1957</td>
<td>William J. Waskowitz</td>
<td>5,300</td>
<td>64%</td>
<td>*9,291</td>
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<td>1958</td>
<td>Charles A. Hall, Jr.</td>
<td>3,890</td>
<td>43%</td>
<td>5,370</td>
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<td>1959</td>
<td>Asa Barnes, Jr.</td>
<td>5,600</td>
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<td>6,665</td>
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<td>1960</td>
<td>Thomas P. Kugelman</td>
<td>4,235</td>
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<td>3,495</td>
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<td>1961</td>
<td>Jon D. Dorman</td>
<td>*3,681</td>
<td>50%</td>
<td>2,580</td>
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<td>1962</td>
<td>A. Richard Pechner</td>
<td>4,296</td>
<td>51%</td>
<td>*11,849</td>
<td>65%</td>
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<td>1963</td>
<td>Craig H. Llewellyn</td>
<td>3,085</td>
<td>37%</td>
<td>4,990</td>
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<td>1964</td>
<td>William J. Houghton</td>
<td>5,556</td>
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<td>4,390</td>
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<td>1965</td>
<td>David A. Hill</td>
<td>4,569</td>
<td>49%</td>
<td>4,425</td>
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<td>1966</td>
<td>Mary Alice Houghton</td>
<td>*3,642</td>
<td>54%</td>
<td>2,923</td>
<td>52%</td>
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<td>1967</td>
<td>James Dowaliby</td>
<td>3,960</td>
<td>59%</td>
<td>*9,170</td>
<td>70%</td>
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<td>Frank E. Lucente</td>
<td>4,145</td>
<td>54%</td>
<td>2,760</td>
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<td>1969</td>
<td>Lee Merrill Jampol</td>
<td>4,736</td>
<td>63%</td>
<td>6,888</td>
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<td>James R. Missett</td>
<td>1,771</td>
<td>39%</td>
<td>2,001</td>
<td>36%</td>
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<td>1971</td>
<td>John L. Cieply</td>
<td>*5,771</td>
<td>59%</td>
<td>4,046</td>
<td>47%</td>
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<td>Paul A. Lucky</td>
<td>1,619</td>
<td>46%</td>
<td>*3,709</td>
<td>54%</td>
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<tr>
<td>1973</td>
<td>David Bailey</td>
<td>1,189</td>
<td>34%</td>
<td>2,273</td>
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<td>1974</td>
<td>Peter J. Bachin</td>
<td>505</td>
<td>22%</td>
<td>710</td>
<td>26%</td>
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<tr>
<td>1975</td>
<td>Daniel Passeri</td>
<td>605</td>
<td>20%</td>
<td>701</td>
<td>24%</td>
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<tr>
<td>1976</td>
<td>Robert F. Taylor</td>
<td>*987</td>
<td>21%</td>
<td>872</td>
<td>27%</td>
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<tr>
<td>1977</td>
<td>David Kreis</td>
<td>555</td>
<td>22%</td>
<td>*1,575</td>
<td>30%</td>
</tr>
<tr>
<td>1978</td>
<td>Duke Cameron</td>
<td>521</td>
<td>14%</td>
<td>1,467</td>
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<td>1979</td>
<td>Barbara Peters</td>
<td>165</td>
<td>6%</td>
<td>640</td>
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<tr>
<td>1980A</td>
<td>Eduardo Alfonso</td>
<td>100</td>
<td>12%</td>
<td>225</td>
<td>15%</td>
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<tr>
<td>B</td>
<td>Mark Bernhardt</td>
<td>235</td>
<td>19%</td>
<td>317</td>
<td>18%</td>
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<tr>
<td>1981</td>
<td>Anthony Urbano</td>
<td>365</td>
<td>15%</td>
<td>365</td>
<td>15%</td>
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</tbody>
</table>
Medical Alumni $194,905 45% $224,432 48%
Former House Staff 6,498 18% 6,863 21%
Parents and Friends 5,439 — 9,858
Miscellaneous 6,422 — 13,393
Baumgartner Match — — 42,183

Medical School Alumni Fund Total $213,264 38% $296,729 42%

Public Health Alumni Fund Class Participation

<table>
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<tr>
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<tr>
<td>1923–1941</td>
<td>Kathleen Howe</td>
<td>$1,960</td>
<td>43%</td>
<td>$4,258</td>
<td>56%</td>
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<tr>
<td>1942</td>
<td>Eric W. Mood</td>
<td>320</td>
<td>43%</td>
<td>430</td>
<td>50%</td>
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<tr>
<td>1943</td>
<td>Eric W. Mood</td>
<td>310</td>
<td>21%</td>
<td>450</td>
<td>50%</td>
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<tr>
<td>1944</td>
<td>Eric W. Mood</td>
<td>130</td>
<td>44%</td>
<td>345</td>
<td>44%</td>
</tr>
<tr>
<td>1945–1949</td>
<td>Kathleen Howe</td>
<td>995</td>
<td>26%</td>
<td>4,035</td>
<td>40%</td>
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<tr>
<td>1950</td>
<td>Elizabeth D. Robinton</td>
<td>290</td>
<td>42%</td>
<td>905</td>
<td>61%</td>
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<tr>
<td>1951</td>
<td>Leonard F. Menczer</td>
<td>255</td>
<td>23%</td>
<td>455</td>
<td>35%</td>
</tr>
<tr>
<td>1952</td>
<td>Yolande F. Lyon</td>
<td>515</td>
<td>42%</td>
<td>700</td>
<td>39%</td>
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<tr>
<td>1953</td>
<td>Milton H. Sisselman</td>
<td>535</td>
<td>38%</td>
<td>615</td>
<td>40%</td>
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<tr>
<td>1954</td>
<td>Ruth M. Taber</td>
<td>160</td>
<td>18%</td>
<td>110</td>
<td>24%</td>
</tr>
<tr>
<td>1955</td>
<td>Frances R. Ogasawara</td>
<td>230</td>
<td>36%</td>
<td>305</td>
<td>33%</td>
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<tr>
<td>1956</td>
<td>Henry M. Parrish</td>
<td>735</td>
<td>32%</td>
<td>710</td>
<td>21%</td>
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<tr>
<td>1957</td>
<td>Edward R. DeLouise</td>
<td>212</td>
<td>25%</td>
<td>602</td>
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<tr>
<td>1958</td>
<td>Thomas T. Flynn</td>
<td>445</td>
<td>21%</td>
<td>300</td>
<td>14%</td>
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<tr>
<td>1959</td>
<td>Dorothy M. Wilson</td>
<td>415</td>
<td>31%</td>
<td>915</td>
<td>39%</td>
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<tr>
<td>1960</td>
<td>Hannah Clark Russell</td>
<td>220</td>
<td>29%</td>
<td>400</td>
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<tr>
<td>1961</td>
<td>Gordon R. Beem</td>
<td>488</td>
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<td>665</td>
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<tr>
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<td>A. Kay Keiser</td>
<td>35</td>
<td>14%</td>
<td>105</td>
<td>31%</td>
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<tr>
<td>1963</td>
<td>David Dolins</td>
<td>430</td>
<td>33%</td>
<td>550</td>
<td>43%</td>
</tr>
<tr>
<td>1964</td>
<td>Estelle Siker</td>
<td>520</td>
<td>38%</td>
<td>1,310</td>
<td>54%</td>
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<tr>
<td>1965</td>
<td>Michael E. Kove</td>
<td>305</td>
<td>30%</td>
<td>430</td>
<td>38%</td>
</tr>
<tr>
<td>1966</td>
<td>Allen Cohen</td>
<td>245</td>
<td>23%</td>
<td>470</td>
<td>34%</td>
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<tr>
<td>1967</td>
<td>James M. Malloy</td>
<td>770</td>
<td>33%</td>
<td>790</td>
<td>26%</td>
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<tr>
<td>1968</td>
<td>Arnold R. Sadow</td>
<td>560</td>
<td>28%</td>
<td>1,300</td>
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</tr>
<tr>
<td>1969</td>
<td>Samuel P. Korper</td>
<td>495</td>
<td>17%</td>
<td>940</td>
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</tr>
<tr>
<td>1970</td>
<td>Susan W. Batler</td>
<td>410</td>
<td>10%</td>
<td>1,125</td>
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<tr>
<td>1971</td>
<td>William P. Ferretti</td>
<td>1,622</td>
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<td>1972</td>
<td>John Biiloff</td>
<td></td>
<td></td>
<td>1,360</td>
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<tr>
<td>1972</td>
<td>Daphne DeJ. Gemmill</td>
<td>405</td>
<td>28%</td>
<td>715</td>
<td>36%</td>
</tr>
<tr>
<td>1973</td>
<td>Judith G. Beatrice</td>
<td>770</td>
<td>27%</td>
<td>600</td>
<td>19%</td>
</tr>
<tr>
<td>1974(A)</td>
<td>Rose Salisbury Beer</td>
<td>270</td>
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<tr>
<td>1974(B)</td>
<td>Elizabeth Helming</td>
<td></td>
<td></td>
<td>290</td>
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<tr>
<td>1974(B)</td>
<td>Roberta Lawrence</td>
<td>455</td>
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<td>315</td>
<td>39%</td>
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<tr>
<td>1975</td>
<td>Abigail L. Smith</td>
<td></td>
<td></td>
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<tr>
<td>1975</td>
<td>Linda K. Broker</td>
<td>556</td>
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<td>1976</td>
<td>Elaine P. Anderson</td>
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<tr>
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<td>Carroll Schilling Neisloss</td>
<td>575</td>
<td>24%</td>
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<tr>
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<td>Richard C. Poole</td>
<td>655</td>
<td>26%</td>
<td>1,073</td>
<td>33%</td>
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<tr>
<td>1979</td>
<td>Ralph Tartaghione, Jr.</td>
<td>575</td>
<td>26%</td>
<td>1,315</td>
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<tr>
<td>1980</td>
<td>Christina P. Quinn</td>
<td>543</td>
<td>27%</td>
<td>880</td>
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<tr>
<td>1981(A)</td>
<td>Diane E. Goren</td>
<td>435</td>
<td>31%</td>
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<tr>
<td>1981(B)</td>
<td>Jill Goldwater</td>
<td>105</td>
<td>15%</td>
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</table>

Alumni $18,790 28% $34,149 37%
EPH Associates — — 1,945
Miscellaneous — — 2,039
Baumgartner Match — — 10,667

Public Health Alumni Fund Total $18,790 28% $48,800 37%
Contributors to the 1981/82 Fund

1903
ROBERT ROWLEY*
1906
CHARLES MITCHELL*
1908
MICHAEL PARLATORE
1912
WALTER TILDEN*
1913
RALPH TAYLOR*
1919
WILLYS MONROE*
1920
OSCAR BRENNER*
1921
ELLA W. CALHOUN
JOSEPH T. EAGAN
1922
BENEDICT R. HARRIS
CHESTER HURWITZ
HELEN PLANGER
REGINALD T. LOMBARD
MAURICE F. O'CONNELL
EDWARD T. WAKEMAN
1923
WILLIAM COHEN
JOSEPH ESOKALI
JACQUES D. SOIFER
JOHN J. BATCHELOR
JACOB MELLIION
JOSEPH A. JOHNSTON
JOSEPH T. EAGAN
OSCAR BRENNER*
CLEMENT F. BATELLI
ALBERT J. JABLONSKY
HYMAN COHEN
WILLIAM H. VEALE
1924
JOHN J. BATECHLER
DAVID M. RASKIND
MYRON A. SALLICK
JACQUES D. SOIFER
HAROLD T. VOGEL
1925
DORENCE S. COWLES
EDWARD A. CRAMOND
WALDO F. DESMOND
HENRY W. FERRIS
MATTHEW GRISWOLD
R. HAROLD LOCKHART
EDWARD LUDWIG*
HARRY C. O'ARD
NATHAN E. ROSS
ROBERT T. RUBINSTEIN
JOHN RUSSELL*
ALVIN A. SCHAYE
LEWIS A. SCHEUER
1929
JAMES RAE ARNEILL JR
FRANK H. D'ANDREA
CHARLES J. EPISTEIN
ROBERT A. FRISCH
OLIVE GATES
GEORGE S. GOLDMAN
ALEXANDER HAFF*
JOHN A. HANGEN
HAROLD J. HARRIS
GEORGE P. JACKSON
VERNON W. LIPPPARD
PAUL F. MC ALENNEY
TONY LIEBMAN RAKIETEN
WILLIAM F. ROTH JR
RUSSELL B. SCOBIE
BENJAMIN SPOCK
ROBERT T. TENANT
RAYMOND WASHBURN*
MABEL WILSON
FUMIKO YAMAGUCHI-AMANO
HRIMAN YANNET
1930
DANIEL BEERS*
FREDERICK FITZHERBERT BOYCE
CHARLES BRECK
ROBERT D. M. CUNNINGHAM
VINCENT A. DOROSZKA
KNOX H. FINLEY
EDWARD FLYNN
J. ROSSWELL GALLAGHER
LEONARD GREENBARG
JAMES H. CHART
EDMUND L. KITZMEYER
PAUL H. LAVIETES
MOSHE D. LISHNER
JAMES LYNCH*
JOHN C. MENDILLO
PAUL WATSON
AMY H. WILSON
CHARLES L. WOOD
1931
DANA L. BLANCHARD
HENRY H. BRIGGS JR
BENJAMIN CASTLEMAN
MICHAEL D. AMICO
RICHARD L. FRANK
HELEN R. GILMORE
PAUL A. HARPER
HAROLD E. HARRISON
MORRIS HELLER*
THOMAS C. JALESKI
A. PHILIP LAFRANCE
RHODA M. MICKEL
NEIL A. NEWMARK
SHELTON PAYNE
MORRIS L. RAKIETEN
ABRAHAM J. SCHECHTER
JAMES A. STRINGHAM
1932
LOUIS K. ALPERT
REGINALD V. BERRY
HENRY BRILL
FRANK CARROLL
CLEMENT C. CLARKE
HESTER B. CURTIS
JOSEPH P. DONNELLY
LEWIS E. FOSTER
CONRAD K. LAM
MARIO L. PALMIERI
ARTHUR J. PRESENT
ELIZABETH M. RAMSEY
BENJAMIN N. TAGER
RUDOLPH E. VANDEVERE
MYRON E. WEGMAN
CARL HENDRICKS WIES
FRANK B. WISNER
EDMUND A. ZYBULEWSKI
1933
MYRON ADAMS*
LEE E. FARR
FRANKLIN M. FOOTE
JACK GREENBERG
DANIEL H. HARVEY
GEORGE K. HIRST
ROBERT W. HUNTINGTON JR
JOHN G. MARTIN
JOSEPH MIGNONE
RAYMOND E. MILLER
ASHLEY POND III
LESTER Q. STEWART
SIDNEY STRINGER*
FREDERICK A. WIES
FRANCIS M. WOODS
1934
FREDERICK BECK
JAMES F. BLADES
JOSEPH BUDNICK
DEWITT H. DOMINICK*
DERICK A. JANUARY
KNOWLES B. LAWRENCE
THEODORE P. MERRICK
HERBERT C. MILLER
EDWARD T. O'DONNELL
JOHN B. OGLEVIE
LUCIEN M. PASCUCCI
HARRY SHERMAN
WILLIAM R. WILLARD
GEORGE ZALKIN*
1935
GEORGE A. CARDELL JR
SAWNIE R. GASTON
H. HOFFMAN GROSKLOSS
JAMES QUINTIN HARALAMBE
W. HOWARD HORNER
SAYMEL D. KUSHLAN
NORMAN E. PATTEFIELD
NORMAN C. PRINGLE
MILTON ROSE
CLARK P. SABLE
CAZI C. SEALE
WALTER A. L. THOMPSON
SAMUEL Z. ZELMAN
1936
GEORGE HENDRICKSON BROWN
LESTER W. BURKET
ALBERT W. DIDDLE
FRANKLIN F. FERGUSSON
MARGARET C. GILDEA
GEORGE D. GROSS
GEORGE A. HAHN
LOUISE G. HUTCHINS
EDFRED R. JERSEY
ROBERT A. KIMBALL
J. EDWARD WALKER
JOHN H. WENTWORTH
MALVIN F. WHITE
1940
THEODORE E. ALLEN
JOSEPH V. BALDWIN
RONALD S. BECKETT
JACK S. BLAISDELL
PHILIP S. BREZINA
CRAWFORD J. CAMPBELL
DAVID CROCKER
THADDEUS S. DANOWSKI
WYNNY DEAN
ROBERT M. DUNLAP
JAMES F. FERGUSSON JR
EUGENE J. FITZPATRICK JR
JOHN C. HALEY
H. STUART IRONS JR
DONALD G. JOHNSON
PAUL D. MACLEAN
EDWARD J. MARTIN
WILLIAM A. OAKES
L. R. SANNELLA
W. NORMAN SEARS
JOSEPH E. SokAL
J. CHAMPNEY STAYLOR
PATTY C. TAYLOR
PETER W. TAYLOR
WILLIAM J. WELLS
HELEN W. WOODS
1941
JOHN R. BAMBER
ROBERT H. BALDWIN
JOSEPH E. BARMAN
PAUL H. BARBOUR JR
W. RANDAL BELL
KENNETH E. BERGER
JAMES F. M. DICKSON
JOHN C. MARTIN
HERBERT H. O'NEILL
H. STUART IRONS JR
DONALD M. JOHNSON
PAUL D. MACLEAN
EDWARD J. MARTIN
W. H. OAKES
L. R. SANNELLA
W. NORMAN SEARS
JOSEPH E. SokAL
J. CHAMPNEY STAYLOR
PATTY C. TAYLOR
PETER W. TAYLOR
WILLIAM J. WELLS
HELEN W. WOODS
1942
ROBERT H. ALPERN
RUBY A. ARONSON
J. EDWARD BURKE
JOHN C. HALEY
THEODORE TYBERG
DANIEL W VANHEECKEREN
ROMULO L VILLAR
THOMAS A WARTHIN
ALAN WEINBERG
SU LI WENG
HERBERT ALLAN WENNER
GEORGE WHARTON
ROBERT R WHITE 3D
ROBERT J WILLIAMSON
EJI YANAGISAWA
ROBERT C YOUNG
MARVIN PAUL ZIMMERMAN
RICHARD WALTER ZIMMERMAN
LAWRENCE H ZINGSER
LOUIS ZINERTHOFER

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ROBERT AUGUST
STANLEY AUGUST
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MINNIE R CARTWRIGHT
ARE CAZEN
RICHARD S CHILDSD
EVIS J CODA
SIDNEY J COHEN
D CONKLE
RALPH DICKER
KENNETH T DORAND
WILLIAM C DRENNAN
JEYMARD
J MEIGS
JUULIS NISS
HERBERT A NESTLER
WILLIAM G O'DONNELL
RICHARD D OTIS
FLORENCE L PACKOFF
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LEONARD PORTNEY
HOWARD I RATAIN
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JACK SHANA
SEYMOUR A SIKOV
NORMA F SIMONSON
ANTONIO SIU
ALLEN SOSIN
PHILIP SOKS
HOWARD M SPIRO
PAULINE E SWAN-FERM
G TANGOREN
LLO TEITZ
ANTONIO URBANO
BENJAMIN WAGSHAL
U WEIL
HAROLD WEINBERG
MILTON WEINBERG
IRENE GARROW WERNE
TOKI Y WONG
ROSALYN YARMUSH

Epidemiology & Public
Health Associates
Thomas H. G. Aitken
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Edward M. Cohart
George B. Darling
Wilbur C. Downs
Alfred S. Evans
Adolf Pharo Gagge
John Goldman
John W. Meigs
John A. Nelson
Edward M. Opton
Colin White

MARK THIS DATE ON YOUR CALENDAR
JUNE 3-4, 1983
MEDICAL SCHOOL ALUMNI WEEKEND
Stanley D. Truelson, Jr.
Librarian, Yale Medical Library
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Medical Care of the Aged
The Study of Event-Related Brain Potentials
Progress in Treating Intractable Epilepsy
Here and About
Alumni News
First-Year Postgraduate Appointments

Cover: "'Carnot Malade!'", a rare first state of a lithograph by Henri de Toulouse-Lautrec in the Clements C. Fry Collection, shows the President of France, Sadi Carnot, being treated for a "liver ailment" in 1983. The print was commissioned as a cover for a cabaret song which satirized Carnot and his scandal-ridden administration. The song’s political refrain stated, "If Carnot is ill, it is probably in order to be like the government." For more about the Fry Collection, see page 20.

Photographs in this issue are by T. Charles Erickson except where noted
MEDICAL CARE OF THE AGED
Paul B. Beeson, M.D.

Dr. Paul B. Beeson, a professor of medicine emeritus, University of Washington, Seattle, is editor-in-chief of the Journal of the American Geriatrics Society. He was one of four distinguished speakers at a symposium on "Ethical Issues in Health Care" which was a part of the Yale-New Haven Hospital dedication ceremonies in June 1982. Dr. Beeson has given Yale Medicine permission to publish this unedited transcript of the talk which he gave on that occasion. We believe that his comments on this topic will be of interest to our readers.

With regard to the topic of ethical issues in the care of the elderly, I'd better begin by pointing out the limitation of my perspective. I am not an ethicist or a philosopher. I'll be talking mainly on the basis of personal experience with individual cases, in a setting of academic medicine, in a tertiary care type of hospital. The patients there, often elderly, are referred for short-term stays, for diagnostic procedures or therapy. We have very little opportunity to observe their lives and progress outside the hospital as in other types of institutions.

The issues I am going to be talking about have become much more insistent and much more troubling in the last thirty years because of developments in science and technology of medical care and, particularly, because of the development of life support systems such as dialysis or assisted respiration, cardiopulmonary resuscitation, and so on. One of the ways which ethical issues intrude on these considerations has already been referred to: the matter of cost to society, inasmuch as health care amounts to almost 10% of the gross national product. We are obliged, I think, to consider the impact of what we do because we all pay these bills, through our taxes, third-party insurance, and so on. One statistic that impressed me greatly was to hear Dr. Sanders, the former head of the Massachusetts General Hospital, say that in the decade between 1965 and 1975, they employed 1,000 additional people, much of it because of the creation of 10 intensive care units. Of course, this is one of the reasons why cost is becoming so important. The elderly are a special case in point, because, although only 11% of our population is beyond the age of 65 years, that segment uses up about 30% of the nation's health bill. So problems of cost in the care of the dependent elderly are growing, and the problem is going to get worse because of the demography. More and more people are living into the age of retirement, long past the age of child-rearing. Families are becoming smaller, so that the earning proportion of our population is shrinking. Certainly after the year 2000, when the effects of the post World War II baby boom begin to bring that large chunk of the population into the age of retirement, the care of the elderly is going to become an even more serious problem. Another factor in addition to the ones that I've mentioned is malpractice litigation. There is, of course, a great increase in the amount of this.

Now, we have entered an area of public discussions about the matter of sustaining life in patients who have suffered apparently irreversible brain damage. Our medical journals are carrying editorials and general articles discussing such things as the care of the elderly, the ethical and societal issues involved. Some new phrases are heard on the wards nowadays such as "quality of life" and "death with dignity". These are tossed about in a somewhat careless way, without too much definition.

Let me get into this by citing examples of problems that have made a great impression on me as an internist practicing in tertiary care hospitals. The first type is one that I saw soon after I moved to Seattle. I was walking down the corridor with one of the residents and we came to an old
man in a wheelchair. He (the resident) said, "I've got to show you our star patient." The story was that several months before, this man had been struck by an automobile and had suffered multiple fractures of his extremities and also of his ribs so that he had a flail chest. He was rushed to the hospital and in the emergency room it was obvious he could not survive without assisted respiration. This was begun and still had to be carried out for some hours each night when I saw him. months later. In the immediate post-injury period, he suffered a renal shutdown and had been on dialysis for a while. He also had acute respiratory syndrome with a "white lung", which eventually was taken care of. He had pneumonia and had been brought through that. He had any number of transfusions. He developed disseminated intravascular coagulopathy, which eventually subsided with platelet transfusions and other kinds of care. They could not do much for the fractures in his extremities because of these pressing problems, so the fractures were more or less allowed to heal in whatever positions the bones were in. This had left him with a good deal of pain.

Two months after the injury, he developed mesenteric infarction and had to have a bowel resection. This had been successful, but he was by then a very frail man. I listened to this story and thought a great deal about it. I could guess at the expense involved in taking that man through all those kinds of treatments. Certainly in a hospital where bills are rendered to the patient's insurance company, the bill would have been in the tens of thousands of dollars — perhaps more than an average citizen could hope to save over a lifetime. I remember, too, that in driving back and forth to the hospital, I used to pass a public school in a low-income area of Seattle. The schoolyard had no recreational facilities. Paint was peeling from the school building, and many windows had broken panes. I kept thinking: my goodness, what could be done for that school for the amount of money that was spent in keeping that old man alive, to suffer a great deal of pain? My own inclination was that it has been unfortunate that our modern lifesaving technology had been available. But there is an important follow-up: I saw that man three or four years later, when he was admitted to the ward on which I was attending physician. He was better, he was enjoying life, and was glad that all of those things had been done for him.

At the other end of this spectrum of dilemmas is a more common kind of problem. A patient is transferred into the acute care hospital from a nursing home because he has fever. On examination it is quickly recognized that the fever is due to pneumonia. Bacteriologic studies are carried out, the appropriate antibiotic therapy is given, and the patient is supported in the intensive care unit for a few days. But then it is found that the patient is severely demented, and unresponsive, and no one has come to visit him. The resident in charge calls the nursing home and says, "Your patient’s fever is gone, his pneumonia is clearing, but he seems to have become so demented that we can't communicate with him." The reply, "Well, he’s been that way for months. We simply felt we had to transfer him to you for the treatment of whatever was causing his fever, but he has been abandoned by his family. He sits here apparently unaware of events taking place around him." Then the question comes up whether we had performed a worthwhile service by prolonging that kind of life. I must qualify a bit here, because in the world outside of academic institutions that kind of surprise doesn't present itself as frequently, because there is likely to be a doctor who knows the background and is in much better position to exercise options about aggressive treatment than the resident who happens to be on duty in the emergency room when such a patient comes in, unaccompanied by information about the background.

The matter of expense is one of the most troubling things in modern medicine. Should we recognize a duty to society and to our national welfare when we commit the expenditure of vast sums of money to the care of individual patients? This is a distasteful thing to have intruding on one's clinical thinking — whether one should even give thought to expense, or whether the entire effort should be guided by the sanctity of human life and saving of human life? Those people who champion the view that there should be no other thought except the duty to prolong life to the very last possible moment have an easy way of getting out of this dilemma. Dr. Eugene Stead of Duke; a person I have known well for a long time and for whom I have the highest regard, has written an editorial in the Journal that I edit, The Journal of the American Geriatrics Society, April, 1982, entitled “Ethical Issues in the Care of the Elderly”. He quite courageously, I think, takes up the subject of the cost of prolonging life and gives very thoughtful consideration of it. Stead is known for an ability to see things clearly, without regard to the opinions of those around him. He speaks of the fact that our society does countenance some inequities; as examples, he points to conditions that prevail in many of our institutions for care of mentally retarded people, the conditions in our prisons, the conditions in many of our nursing homes, the conditions of life in some of our inner cities, and he emphasizes that society is aware of these. Then he addresses the question whether we are justified in spending a great deal of money on a patient who cannot be expected to live more than another three months, or whether that
amount of money ought to go into education of dis advantaged children. He says, “I would lean toward the latter.” As editor of the journal, I am already beginning to get some “static” on that statement, likening it to the attitudes of the Nazi experimentalists.

Let me say just a word or two about the elderly as a group and our attitudes toward them, whether they’re sick or well. I’ve already mentioned that they are increasing in numbers. More people are living into seventies and eighties than ever before. There is no question that our culture tends to have a feeling toward the changes of old age that can almost be described as abhorrence. The distortions of the body and of the mind make us appear unattractive, and contrast with our enchantment about youthfulness, and the way we try to look and act youthful. All one needs to do to get an indication of this is to leaf through a magazine or to sit and watch advertising on television. One gets the impression that all of the people who use toothpaste or deodorant, or who take pleasure cruises, are good-looking young people. We don’t see very much about what some people would like to feel are the beauties of aging. Why do we feel this way? Some psychologists say it is because we realize subconsciously what lies ahead for all of us, that we see in those older people the changes we hate to envision for ourselves. For many years, I noted an example of this sort of emotion when I used to take morning report with the housestaff. They identified with the people in their own age group, and spoke of their illnesses as “tragic”, but could comment objectively about the same illnesses in people forty years older. Then there are the unpalatable bits of hospital lingo that we hear about the older patients — for example, the term “gomer”. And articles are being written about the “hateful patient”. “Gomers” and “hateful patients” always seem to be older people. This gives us some idea of the way young health professionals tend to think of the elderly. And from there we move easily into that much used phrase, “quality of life”. They are asking themselves: what is the quality of this patient’s life? Is it really life with quality? They’re certainly not using it in the sense of “the quality of mercy”. They are not talking about high quality of life. Discussion of the quality of life begins when considering a person who is really only marginally existing, in a condition that none of us would ever like to think of for ourselves. Sometimes the word “quality” seems to be confused with the word “quantity”. Do we want to preserve this patient’s life for a few more days or weeks or months? The difficulty is: can we decide what quality of life means to that person? It is particularly hard for young people to decide issues of that kind in the case of elderly patients. One of the young physicians in Seattle, who is much interested in ethical issues in medicine, said recently, “For me, one of the features that makes for quality of life is the ability to love, but for an elderly, partially demented woman in a nursing home, it may be represented by the ability to go on crocheting”. This is worth keeping in mind when we’re thinking about whether a given patient has a possibility of life of quality. It was remarked two centuries ago that a person who begins to take it on himself to decide about the value of someone else’s life can become the most dangerous person in the state.

Let’s turn to what is sometimes referred to as passive euthanasia. That is, for example, withholding antibiotics when the elderly, dependent patient who seems to have nothing to live for, develops pneumonia. Or, cutting down on the intake of fluids; or failing to apply modern therapy with as much zest and force as we would in a younger individual. This business of passive euthanasia leads right into a sort of slippery slope toward inhumane treatment, and we have got to be awfully careful about the consideration of withholding antibiotics for the patient with pneumonia, as in the second example that I presented when I began.

One of the things that comes up in modern hospitals now is the question of deciding in advance whether an attempt will be made to resuscitate a patient who has just died. Most hospitals now have their own private code which will summon the emergency team. In the hospital I’ve been working in, the term simply was “no code”. Perhaps a more widely used expression is “do not resuscitate”. There ought to be very careful safeguards in any institution as to who has authority to write such an order, and what persons will have to concur in it. Certainly the chief resident and the attending physician ought to concur. And the mere fact that that order is in the record should not necessarily interfere with taking every measure to help that patient to survive some acute episode, if it appears that there is a possibility of helping the patient. Ideally, that kind of decision ought to be taken in consultation with the patient at a time when the patient is competent to make such a decision. If not, we have the more difficult problem of discussing it with the patient’s family. I have always found a lot of difficulty here because I have a feeling that making a family help me with that kind of decision may lead them subsequently to have a feeling of remorse because they didn’t say, “No. Go for it. Try to keep him (or her) going”. I don’t have firm answers for this. I do think that discussing it with the patient well in advance is something that should be done more often: that patients will appreciate, and that it can do some good. One system for handling it is with the so-called “living will”. This doesn’t have true legal standing, but nevertheless it has a considerable value for the doctor in charge. The living will is simply a letter the patient addresses to the doctor at a
time when the patient is fully able to think things out. It usually says something to this effect: ‘If I should become severely disabled and mentally incompetent, I would prefer that if after a given period of time — say, two weeks of care — it appears that I am not showing any improvement, I would prefer that extraordinary measures not be used to sustain life’. This is designed to help the doctor make that kind of decision and also to help the family. I have written such a letter to the doctor in whose care I am at the present time. I have talked to him about it and he said, ‘Just what do you mean?’ My reply: ‘In the simplest terms, I just don’t want to die in an intensive care unit’. If you look around in an intensive care unit, great as it is, and marvelous as some of its achievements are, you don’t see any patient there who is having a good time. The patients are usually supine with things attached to all four extremities. If unable to breathe properly, they’re intubated so that they can’t speak. They may be able to write. They never seem to be turned from side to side but are always on their backs. This doesn’t make a very suitable way to die, particularly because of all the hustle and bustle of healthy young strangers going and coming, talking across the patient about ‘the numbers’ and things of this kind. If you watch, you rarely see one of them even place a hand on a patient or engage the patient’s eyes with their own eyes. It’s a discussion across and above the patient as if he were not even there.

My worst experience of this kind was with a colleague in Oxford, a distinguished scientist whom I had known for some years. We had attended many faculty meetings and some social engagements together. At the time of his terminal illness, he had cirrhosis of the liver and had begun to bleed massively from esophageal varices. We did all the usual things, but he did not stop bleeding. Finally, in consultation with the surgeons, it was decided to try an emergency shunt. He was operated on — a long five hour procedure — during which he had been intubated, so that when he regained full consciousness he was unable to speak. I was in and out of that intensive care unit frequently during the succeeding five or six days until he died. He continued to bleed. His wife sat in a little alcove outside. She would come in to see him now and then. He couldn’t speak to her. He couldn’t even reach out and touch her. But he would wink at her, and I’ll never forget the sight of that brave little gesture. I kept asking myself, ‘What have we done to give this man such an awful way to die?’

Well, I’m near the end of this. In the last few years in a veteran’s hospital in Seattle, I have had the experience many times of having a ward team of residents and students come in to see me about a patient: about this same question of sustaining life. I think they came to me because they knew I was old enough to be able to identify with the patient, and that I had been through this many times before. I didn’t very often say, ‘Cut off his fluids, or his assisted respiration’. I usually counseled that we try not to make a decision about further supportive care for a few more days, because there was a good possibility the issue would be decided for us. But I admit that a time or two,
THE STUDY OF EVENT-RELATED BRAIN POTENTIALS

By William R. Goff, Ph.D. and Truett Allison, Ph.D.

The dramatic increase in the use of computers and computer techniques in medical research and application to health care comes as no surprise to scientists in the Neuropsychology Laboratory. For over twenty years, the Laboratory, which is affiliated with the School of Medicine's Department of Neurology and located at the West Haven Veterans Administration Medical Center, has been using computers to study how the nervous system processes sensory input.

Computers are crucial to the non-invasive recording of the minute electrical potentials generated by the nervous system in the course of sensory processing. Computer processing of the electroencephalogram (EEG) permits the systematic study of these potentials by allowing them to be recorded from the scalp of humans. Based originally on animal research in which recording directly from the exposed brain was possible, it has long been known that brain cells continuously generate electrical potentials as a result of electrochemical (ionic) changes which are constantly occurring within and between them. Although we now know that the pattern of these potentials changes depending on whether the subject is alert or drowsy, awake or asleep, sick or well, in general the pattern of activity bears no necessary relationship to external sensory events. Thus, it is frequently referred to as 'spontaneous' activity.

The discovery of a second type of electrical brain activity, which is similarly related to sensory input, is attributed to Richard Caton while he was working at the Royal Infirmary School of Medicine in Liverpool in 1875. While recording from the exposed brains of rabbits, Caton found electrical potentials related to sensory stimulation which were superimposed on the spontaneous potential oscillations. He immediately realized the implications of these stimulus-related potentials for cerebral localization studies.

Although reported to the International Medical Congress held in Washington, D.C. that year, Caton’s work received little attention. Systematic study of brain electrical activity directly in humans became possible about 65 years later with the report by Hans Berger, who in 1929 repeated and confirmed Caton’s work, and extended the work to man by showing that the use of electronic technology for amplification and visualization of very small electrical signals made it possible to record the spontaneous potentials from electrodes placed on the scalp. This discovery laid the foundation of modern clinical electroencephalography (EEG).

The type of stimulus-related potentials observed by Caton, now called 'evoked potentials' (EPs), are generally of lower voltage than the EEG and, therefore, were poorly resolved by standard EEG techniques. This adverse ‘signal-to-noise’ ratio initially limited human EP research to components large enough to be distinguished in EEG traces or recorded from the brain during neurosurgical operations. Systematic investigation of EPs in man became more feasible with the demonstration in 1951 by G.D. Dawson, an Englishman working at National Hospital in London, that the technique of ‘signal averaging’ could be used to extract evoked brain potentials from background EEG noise in human scalp recordings.

In the late 1950’s, Dr. Burton S. Rosner, then at the Yale School of Medicine and the founder of the Neuropsychology Laboratory, became interested in recording EPs. A psychologist educated in psychophysics and physiological psychology, Dr. Rosner was interested in relating subjective sensory experience as measured psychophysically to underlying neurophysiological events.

Since psychophysical determinations require human subjects who can follow instructions and report sensations, human EP recording offered the opportunity to study associated brain activity in the same subjects. Computers
of any type were a relatively recent development and their size and cost precluded the dedicated laboratory use required to apply signal averaging of the EEG to EP recording. Thus, no instrumentation for such an application was available.

At about the time, Truett Allison came to Yale as a doctoral candidate in psychology. Since his undergraduate training was in electrical engineering, Dr. Rosner interested him in helping to design and build an averaging device. In 1959, Dr. William Goff joined the laboratory, and participated in the later stages of development of what was basically an analog computer using a continuous-loop magnetic tape recorder as its "memory." This two-channel averaging device was a pioneering application of electronic technology to the recording of EPs from the scalp of humans.

The Laboratory's averager was capable of recording a much longer period after stimulus delivery (averaging epoch) than Dawson's device, and the scientific staff was able to observe complex SEP activity lasting as long as 350 to 400 milliseconds post-stimulus. In the 1960's, their research focused on describing the morphology and scalp distribution of SEPs, its parcellation into segments by the demonstration of their different neurophysiological properties, description of their characteristics under barbituate anesthesia, which permitted their comparison to a considerable body of comparable animal literature, and changes in EP characteristics in various stages of sleep. A complementary program of animal research was conducted, oriented primarily to discovering the neuroanatomical origins of human SEPs. Research was also expanded into the examination of EPs in the visual, auditory, and olfactory modalities.

The first EEG averaging device based on digital computer technology became commercially available in the early 1960's as well, resulting in a rapid expansion of EP research throughout the world. Many clinical applications were attempted but were not particularly successful, probably because there was still too little known about the neuroanatomical substrates of EPs.

The Neurophysiological Laboratory's (NPL) shift to more directly clinical research began in 1970 with a study, conducted by Dr. Peter Williamson, a Yale neurologist. It was designed both to determine the effect of strokes affecting the sensorimotor area, and to explore hypotheses based on animal research about the nature of SEP projection pathways to the brain. Clinically, a positive relationship was found between the degree of sensory deficit resulting from the stroke and alterations in the SEP. The results also indicated that the sensory projection pathways found in lower animals, such as the cat, were different from those of man. This finding, together with the observation that lower animals have less complex EPs than humans, indicated that, in general, case development of animal models of human EPs would require the use of primates.

Both basic and clinical research has expanded rapidly, and has led to numerous clinical diagnostic and prognostic applications. The basic advantage of EP analysis for clinical use derives from the fact that it is an objective, benign, non-invasive test of the integrity of the somatic, auditory, and visual sensory systems and associated brain function which does not require patient cooperation, or even that the patient be conscious. It therefore has its most valuable use in conditions where routine neurological examination is dependability or impossible.

NPL and similar laboratories are currently engaged in the development of human EP recordings to assist in the evaluation of neurological disorders. Since some EPs can be recorded without active participation by the patient (for example, while the patient is asleep or comatose), they are valuable in assessing the neurological status of patients who cannot communicate with the physician. For example, in collaboration with Drs. Bennett Shaywitz associate professor of pediatrics and neurology and Peter Rothstein at Yale, Drs. W.R. and G.D. Goff have been using somatosensory EPs (evoked by stimulation of the median nerve at the wrist) to evaluate the neurological status of children with Reyes Syndrome, a serious, often fatal disease afflicting young children. Physicians at Yale-New Haven Hospital have had considerable success in reducing the mortality rate from Reyes Syndrome by using deep sedation, muscle relaxation, and artificial ventilation to reduce the abnormally high pressure on the brain and other effects of the disease. However, this treatment has the undesirable side effect of preventing the physician from communicating with the child and from carrying out neurological examinations. EP recordings from Reyes Syndrome patients have demonstrated that the degree of abnormality in EPs relative to those of normal children provides a useful index of brain function during the course of treatment, and may predict which children are likely to
have later neurological or behavioral impairment. The use of EPs to assess the degree of brain damage in other types of coma and following traumatic head injury is also being actively investigated.

Another important clinical application of human EP recordings is to help detect and localize lesions and other neurological abnormalities located in or near the sensory pathways. It has become clear over the last ten years that such lesions can produce definite EP abnormalities even in patients who report no noticeable symptoms. The detection of such clinically "silent" lesions is proving valuable in the early detection of demyelinating lesions of the type which later develop into multiple sclerosis, in the early detection of brain tumors, and in detection of lesions of several types of hereditary neurological disease in persons who have affected family members but who have not yet reported symptoms themselves. Some of these abnormalities may also be detectable by radiological techniques such as the CT scan, but some produce little or no structural abnormality (at least in the early stages of the disease) and may be missed in radiological studies.

Dr. Allison currently employs a battery of EP tests to search for such clinically silent lesions and to help verify the location of lesions whose existence is suggested by clinical findings or radiological studies. VA patients are tested at NPL and patients in Yale-New Haven Hospital are tested in a similar laboratory established by NPL and the Department of Neurology, and directed by Dr. Ann Hume research associate in neurology. The EP test battery consists of stimulating each of the three major sensory systems - the visual, auditory, and somatosensory systems. The visual test uses a checkerboard pattern stimulus which is rapidly moved twice each second so that the positions of the light and dark checks appear to reverse. This stimulus produces a barrage of nerve impulses traveling from the retina through the optic nerve to the thalamus and visual cortex. Activation of visual cortex produces a characteristic EP component approximately 100 milliseconds following the checkerboard reversal. As human EPs go, this potential is relatively large (about five millionths of a volt) and quite stable in latency in neurologically normal subjects. Abnormally long visual EP latencies indicate the presence of a lesion somewhere along the visual pathway. This technique is currently one of the most sensitive means of detecting demyelinating lesions in the optic nerve, a common precursor of multiple sclerosis. During the acute phase of the disease, patients may experience blurring of vision or other visual symptoms, but these often disappear after several weeks. However, recent work suggests that the demyelination is still present and produces the characteristic EP abnormality. Thus, a useful feature of this test is that it allows verification of optic nerve lesions which may have occurred years earlier and either produced no visual symptoms at the time or produced symptoms which disappeared before the person became concerned enough to see a physician.

The auditory and somatosensory systems are tested with EPs in a similar manner, using acoustic clicks and brief shocks to a peripheral nerve, respectively. The auditory and somatosensory EPs that have been most clinically useful are those known to be generated by particular structures along the afferent pathway in each modality. By determining which potentials are abolished or altered, it is possible to infer the location of abnormalities in the peripheral nerve, brainstem, or midbrain. The auditory and somatosensory EPs are both extremely small (less than a
millionth of a volt) and between 500 and 1000 stimulus repetitions are usually necessary to resolve them adequately. Fortunately, such EPs can be recorded at stimulation rates of 5–10 per second, so that the tests can be carried out in a few minutes. Auditory EPs have been useful in the early detection of acoustic neuromas, demyelinating lesions of the brainstem or midbrain, and other types of neurological disease that affect those brain regions. Somatosensory EPs have also been useful in detecting demyelinating lesions, as well as other spinal cord, brainstem, and midbrain abnormalities.

The pathophysiological mechanisms underlying some of the EP abnormalities in neurological disorders are relatively well understood. For example, the abnormally late visual, auditory, and somatosensory EPs associated with multiple sclerosis result from demyelination of nerve fibers which slow their conduction velocity. The pathophysiological mechanisms responsible for other common EP abnormalities, such as the abolition of certain auditory and somatosensory EPs, are not yet understood.

EP recordings are also clinically useful in neurosurgery. When abnormal tissue must be removed from the brain, it is important to spare crucial areas such as sensorimotor cortex and the areas devoted to speech. In collaboration with Drs. Peter D. Williamson and Dennis B. Spencer of the Departments of Neurology and Neurosurgery, an NPL group headed by Dr. Charles C. Wood has developed a new technique based on cortical surface EP recordings for use in localizing sensorimotor cortex during neurosurgery. The traditional localization procedure was developed by Penfield and colleagues at the Montreal Neurological Institute in the 1930s and 1940s. It involves stimulation of the cortical surface with minute electrical currents. Stimulation of sensorimotor cortex produces sensations or movements in parts of the body corresponding to the cortical area stimulated. Careful mapping of the sensory or motor responses to stimulation of a number of different cortical sites allows the location and extent of sensorimotor cortex to be estimated. A disadvantage of the procedure for patients is that the surgery must be performed under local anesthesia so that they can be awake, cooperative, and able to report sensations and movements elicited by the cortical stimulation.

The NPL procedure involves stimulation of the median nerve at the wrist as in the somatosensory EP recordings from the scalp described above, and recording from an array of sterilized electrodes placed directly on the exposed cortex. The median nerve stimulus produces EPs which have a characteristic spatial distribution on the cortical surface. The location of sensorimotor cortex can be reliably inferred from the form of that spatial distribution. The NPL procedure is at least as reliable as the traditional electrical stimulation procedure, it is faster, and it does not require the patient's cooperation; hence it can be used with general anesthesia.

A major value of EPs used in neurological test paragraphs derives in part from their insensitivity to subjective states; if the sensory pathways are intact, these EPs will be present. However, the signal averaging technique has also been used to study other potentials which are elicited only when a stimulus has meaning or significance within information processing tasks which the subject is performing. Since such potentials are not, strictly speaking, "evoked," they have been termed "event-related poten-
Dr. Allison trials” (ERPs). For example, if subjects are required to categorize each of a series of tones into two groups (for example, high versus low frequency tones), ERPs time-locked to those tones will include a group of potentials not present to the same stimuli delivered without a task. The timing of those potentials is proportional to the time required for the categorization: if the task is to categorize high and low frequency tones, these potentials will occur about 350 milliseconds after the tone onset, whereas if the task is more difficult, for example to categorize words into groups based on their meaning, the potentials will occur some 200–300 milliseconds later. Such ERPs are thought to represent activity of brain systems involved in elementary cognitive processes.

Dr. Gregory McCarthy of NPL and Dr. Shlomo Bentin, a visiting scientist from Israel, have been conducting research concerned with potentials sensitive to psychological task manipulations. There are two goals of this research: to attempt to characterize the psychological processes associated with these potentials, and to determine what brain systems and structures are responsible for their generation. In employing this approach, NPL scientists hope to gain a better understanding of the neurological basis of certain cognitive processes.

The value and utility of these neurophysiological techniques depends upon two types of knowledge: the statistical limits of normality for potentials recorded from normal human subjects, and the knowledge of the anatomical structures which generate scalp potentials. NPL is engaged in research on both problems. They recently completed normative studies of some of the EPs used in neurological testing and have for many years conducted studies on the anatomical sources of scalp potentials. The latter include recordings from the exposed cortical surface of the human brain during neurosurgery and from chronically implanted electrodes in epileptic patients (see the companion article), experiments in primates and other nonhuman species under conditions comparable to those of the human recordings and, together with Dr. Terrance Darcey of NPL, the development of mathematical models of electrical sources in the brain.

In summary, the work of NPL has helped to establish EP and ERP recordings as a noninvasive means of studying electrical activity of the human nervous system. Such recordings are valuable as neurological tests for assessing the functional integrity of the sensory afferent pathways and related brain structures, and as a means of investigating the neural structures involved in human cognitive processes. Because EP and ERP recordings provide a measure of some aspects of brain function, they are complementary to the CT scan and other radiological techniques for assessing brain structure. Together, such techniques have in the last decade vastly improved our ability to "see" deep within the brain from the outside.
PROGRESS IN TREATING INTRACTABLE EPILEPSY

The Yale epilepsy surgery program is among the foremost in the world. Its success is due in part to intensive ongoing research in pre-surgical evaluation conducted at the West Haven Veterans Administration Medical Center, as well as to the development of new surgical procedures at the Yale School of Medicine. It is also the result of close collaboration between neurologists and a surgeon.

Tom Regan met with interviewers in his room in the Yale Epilepsy Center at the West Haven Veterans Administration Medical Center early in April. A handsome and articulate man in his early thirties, he had come there that morning from Utica, New York for psychological and neurological tests, and his head was crowned with a dozen or so scalp electrodes. A year ago, Mr. Regan had undergone brain surgery to remove the site of epileptic seizures that had affected him for several years.

An estimated 2 million Americans are epileptic. As a result of centuries of myths and misunderstanding about the disorder, a major problem for many of them is not only their seizures, but the psychological, social and economic problems the disorder causes.

Derived from the Greek word, epilepsia, meaning “to seize,” epilepsy does not refer to a simple syndrome of similar symptoms, but rather, to a number of very different types of seizures that vary widely in severity, appearance, cause and consequence. Advances in pharmacology have led to the synthesizing of large numbers of anticonvulsant agents and today, epilepsy can be partly or fully controlled in at least three-fourths of all patients. There is new hope as well for at least some of those patients for whom drug therapy has not been successful.

In addition to developing new technology and drugs to control epileptic seizures, the Department of Neurology at Yale has designed a comprehensive treatment program which includes psycho-therapy and socio-economic guidance. The Epilepsy Center at the V.A. Medical Center is a major part of this program. Designated by the Veterans Administration as its Northeastern United States Center for Epilepsy, it is one of the most highly developed such facilities in the country.

Dr. Richard H. Mattson, clinical professor of neurology, is director of the Center, where twenty-four hour a day intensive closed circuit TV/EEG monitoring enables more accurate diagnosis of seizures, as well as related problems. Its epilepsy surgery program is among the foremost in the world.

The success of the Yale Epilepsy Surgery Unit is due in part to intensive on-going research in pre-surgical evaluation, as well as to the development of new surgical procedures. It is also the result of collaboration among the three neurologists of the Unit, Dr. Mattson, Dr. Susan Spencer, assistant professor of neurology, and Dr. Peter Williamson, associate professor of neurology, who work closely with Dr. Dennis D. Spencer, associate professor of surgery (neurosurgery), who is known world-wide for his work in epilepsy surgery.

Patients are referred to the Epilepsy Center for surgery from medical centers throughout the Northeast United States when medication has failed to control their seizures, and there is no evidence of other illness or disorders, such as brain tumors. Criteria for selection include the patient’s age (between ten and fifty years); the possible surgical accessibility of the disease site; the patient’s interest in and willingness to comply with the extensive pre-surgical evaluation; and whether the seizures significantly interfere with the patient’s life.

“We would probably not operate on a patient who, in addition to his epilepsy, was profoundly retarded and it was clear that the operation would not greatly improve his ability to function”, explained Dr. Williamson. Similarly, the Unit is sometimes referred patients for epilepsy surgery whose seizures are a problem, but whose psychiatric difficulties are an even greater problem. They are not considered good candidates. “We don’t perform surgery to alleviate psychiatric problems — we do it for epilepsy. In fact, we consider major psychiatric problems a contraindication for surgery.”

Ninety percent of all epileptic patients experience their first seizures before they are twenty years old. Tom Regan is one of the exceptions. An Army veteran and college graduate employed as a construction manager of a large
Depth electrode recording shows the onset of a seizure located deep within the right temporal lobe. Precise localization of such seizure sites, which is not possible with scalp electrodes, enables Dr. Dennis Spencer to successfully remove diseased areas without causing significant compromise to brain function.

firm, he was in his twenties when his seizures began. They were mild at first but, as they increased in frequency and severity, he became profoundly depressed and his behavior became increasingly aggressive. Finally, he had to resign his job, and could no longer drive his car. When it became evident that medications and other therapies would not control his seizures, and in fact his epilepsy was becoming increasingly more severe, his doctors in upstate New York referred him to the Epilepsy Center in West Haven.

Candidates for epilepsy surgery go through a battery of tests before the decision is made whether or not to operate. Detailed neuropsychological evaluation includes measurement of verbal and performance I.Q., verbal and visual/spatial memory, language and motor function, and sensory perception. In addition, CT scans and scalp electroencephalograms are made of each patient.

The first human electroencephalogram from the scalp was recorded in 1929 by Hans Berger, a German psychiatrist. His observations that epileptic seizures were accompanied by major electrical disturbances of the brain as recorded on the EEG's, paved the way for subsequent advances in characterization of epileptic seizures.

Since then, new audio visual and medical technology have contributed to the development of highly sophisticated specialized seizure monitoring systems. The Epilepsy Center, under the leadership of Dr. Mattson, Dr. Gilbert H. Glaser, chairman of the Department of Neurology, Dr. Lewis L. Levy, clinical professor of Neurology and others at Yale pioneered many of these advances. The monitoring is done by a highly experienced and motivated staff of nurses, EEG technicians and other paramedical professionals.

The display can be tape recorded for repeated examination by the staff, which facilitates more precise characterization of seizures during sleeping as well as waking hours. "This information is of great value, not only for the diagnosis of specific seizure types, but also for the localization of the onset of the attack." explained Dr. Mattson.

A patient is considered an appropriate candidate for continuing evaluation if his or her seizures are consistent and appear to be coming from a part of the brain where surgery would not greatly impair vision, speech, motor control or memory.

Next, electrodes are implanted deep within the brain for a more accurate localization and description of the seizures. It is a procedure that involves some initial pain, since implantation is done with only local anesthesia, and requires considerable patience on the part of the patient, who must be restrained in bed for the duration of from seven to ten days. Although not widely used, the staff at the West Haven V.A. Medical Center considers depth electrode recording essential in certain types of epilepsy, where seizures are likely to be located deep within the brain on the inside of the temporal or frontal lobe — areas not readily sampled by scalp electrodes.

Up to four electrodes are inserted on both sides of the brain. Each electrode has eighteen contacts on it giving a potential for 144 recording points within the brain. After they have been implanted, they are hooked up to a monitoring program similar to the one used for scalp electrodes. The Surgery Unit has developed a sophisticated 64-channel computerized monitoring system, which is currently under construction. For the time being, a prototype model is used which automatically detects and records seizures on magnetic tape. Patients are closely monitored until a sufficient number of seizures — at least three — are recorded, for final decision making about the viability of surgery.

Although depth electrodes have been used for epilepsy since the 1950's, the technique developed by Dr. Williamson and his colleagues at the Center is unique, and information derived from it is yielding important new insights into seizures. "The other two major centers using depth electrodes insert them from the side of the brain; we put them in from closer to the mid-line, and one through the base of the occipital lobe, which penetrates deep into the posterior lobe," explained Dr. Susan Spencer. The electrodes are longer than ones used by other institutions and therefore, sample a greater area.

The use of the posterior electrode is perhaps the most critical. "It certainly gives us the most information about temporal lobe epilepsy," said Dr. Williamson. "We have learned that occipital lobe onset seizures can look exactly like temporal lobe seizures. We have also found that many temporal lobe seizures come from much farther back in
that lobe than was previously thought. As a result, Dr.
Dennis Spencer has developed a new technique for remov¬
ing temporal lobe seizures which seems very promising.

The procedure designed by Dr. Spencer involves
removing part of the hippocampus as well as areas farther
back in the temporal lobe and allows a more complete
removal of the diseased area than previous surgical pro¬
cedures, without significantly compromising vision,
speech, memory and motor function. Through her exhaus¬
tive review of world literature and her experience at Yale,
Dr. Susan Spencer and her colleagues can now predict
that, when seizures are precisely located, Dr. Spencer's
procedure has a 90 percent chance of curing the epilepsy.

Since the hippocampus is important to memory, a
simple test involving anesthetizing the part of the brain to
be operated on is made. While that side has no sensation,
the patient is presented with various pictures, words and
objects. When the medication wears off, he is asked if he
can remember what he had been shown. “This tells us how
competent the temporal lobe that will not be operated on is
in terms of memory, and if it's not, we will not proceed
with the operation.” Dr. Susan Spencer said.

Operations are performed at Yale-New Haven Hospital
by Dr. Dennis Spencer. He operated on Tom Regan last
April. The procedure involved removal of the left tip of the
left temporal lobe — “way down under,” according to
Mr. Regan. It took about six hours and there was some
pain, he remembers. “But that was a minor investment for
a major improvement,” he said with a smile.

For the first six months following the operation, he had
trouble with memory and speech, but that as well as his
attitude improved. “I began to approach things in a con¬
structive rather than destructive way. Now when things go
wrong, I can laugh at them. It’s a great feeling.”

Patients return to the Yale Epilepsy Center for follow-up
testing every three months the year following surgery, then
every six months the next year, and annually thereafter.
Although Mr. Regan is still on medication as a pre¬
cautionary measure, some patients have been taken off
anticonvulsant therapy with no adverse affects.

What about patients whose seizures come from multiple
sites or from areas in the brain that cannot be removed
without creating serious deficits? In some, this problem
can be approached by a sectioning of the corpus callosum —
a technique known as “split-brain,” in which the two
halves of the brain are physically separated. The corpus
callosum is a large band of connective neural tissues
resembling a large, multi-cable telephone line, that allows
the two halves of the brain to communicate, and thus
coordinate both sides of the body. Previously done in the
1940’s, the procedure fell into disfavor and was discon¬
tinued until early in the 1970’s when it was revived and
improved by neurologists and surgeons at Dartmouth
Medical School. The Yale team began doing the proce¬
dure, modified by Dr. Dennis Spencer, a few years later.
They are the two leading institutions in the country doing
this type of surgery.

Only patients with extremely severe epilepsy are con¬
sidered — patients whose seizures spread so quickly that
they black out, fall down and suffer many injuries as a
result. Some are so severely impaired they must live in a
padded environment. When the operation is successful, it
establishes better control and reduces the severity of the
seizures. A decrease in abnormal behavior is frequently a
very important side benefit.

Contrary to what has been written in the popular press,
the split-brain operation is not devastating. According to
Dr. Williamson, coordination of the two sides of the body is
a problem at first, but usually improves or the patient
learns how to deal with it. There are admittedly problems
with memory, types of motivation and several intellectual
processes that, in the long run, may make it difficult for the
"On the other hand, we see incredible gains in other functions that overshadow these problems. The seizures are much less frequent and definitely less severe; the patients no longer fall down or black out with the risk of terrible injury."

Three-fourths of the patients who have undergone split-brain operations during the past decade, either at Dartmouth or at Yale, have had good to excellent results. If this, and the temporal lobe procedure designed by Dr. Spencer, have proven so successful, why not opt for surgery over drug therapy in all epilepsy?

"That is a good question. The reason is the risks, which are such that we can only recommend surgery for people who have no alternative, and for those who we know will benefit from surgery."

Dr. Susan Spencer replied. "We know that some patients — those who have never worked or socialized or done anything productive or functional — will never achieve functional capacity even if they are cured of their epilepsy. We play God a little bit sometimes in making these decisions. But when you consider the tremendous amount of time and energy involved on the part of the staff, not to mention the incredible involvement on the part of the patient and the family, it doesn't seem fair to spend all of this to get rid of seizures, when the family will still have someone they have to take complete care of anyway," she added. "On the other hand, we can take people who have been completely devastated by the illness and absolutely cure them. It doesn't always work out the way you hoped it would, but when it does, it is tremendously rewarding."

Since epilepsy made it impractical for him to continue construction management, Tom Regan has learned a new profession and is now a traffic planner in Oneida County. He is eagerly awaiting the green light to drive again, and plans to buy a motorcycle as well. "I feel elated just looking forward to all of the things I can do again."

By Marjorie B. Noyes
DR. COHEN IS APPOINTED DIRECTOR OF THE CHILD STUDY CENTER

The Yale Corporation has appointed Dr. Donald J. Cohen, professor of pediatrics, psychiatry and psychology, director of the Yale Child Study Center. Dr. Cohen is a well-known authority on mental illnesses in childhood. His appointment is effective July 1.

In his new position, Dr. Cohen will succeed Dr. Albert J. Solnit, a distinguished child psychiatrist and author on the mental health of children, who has been director of the Child Study Center since 1966. Dr. Solnit, Sterling Professor of Pediatrics and Psychiatry, will continue his research, patient care and teaching responsibilities.

Dr. Cohen is also associate director of the Children’s Clinical Research Center at Yale-New Haven Hospital, and co-director of the Yale Mental Health Research Center. He is internationally recognized for his investigations in the neurochemical dysfunction, as well as the cognitive and learning disabilities of children with disorders such as autism, childhood psychosis, aphasia and Tourette’s syndrome. Applying methods of developmental psycholinguistics, he and his colleagues at the Child Study Center have studied language patterns in autistic and aphasic children. In collaborative studies with teachers and parents, often involving hours of observation at home and in schools, they have delineated the relations between cognitive difficulties and social competence in these children.

"The detailed description of children’s underlying competence often provides a framework for designing educational interventions for autistic children," he observed. "While formal testing may underestimate a child’s true competence, many hours of careful observation can reveal remarkable underlying abilities which can be capitalized on in specially structured educational settings."

Dr. Cohen, who was graduated summa cum laude from Brandeis University in 1961, was a Fulbright Scholar in philosophy and psychology at Trinity College, Cambridge University, England for a year before he attended Yale School of Medicine. He received the Miriam Kathleen Dasey Award and his M.D. degree cum laude in 1966.

During the following two years he was a research and teaching fellow in psychiatry at Harvard Medical School as well as assistant in medicine at Children’s Hospital Medical Center, Boston. From 1970 to 1972, he was a clinical associate at the National Institute of Mental Health, Adult Psychiatry Branch, as well as special assistant to the Director of the Office of Child Development, Department of Health, Education and Welfare.

Dr. Cohen came to Yale in 1972 as associate professor of pediatrics, psychiatry and psychology, and was appointed professor in 1979. He has received a Woodrow Wilson Fellowship in Psychiatry (1961); Falk Fellowship of the American Psychiatric Association (1970–71); Annual Public Service Award, National Society for Autistic Children (1972); Special Recognition, Hofheimer Prize Board, American Psychiatric Association (1977); and the Ittleson Award, American Psychiatric Association (1981). He is a member of the Board of Trustees of Brandeis University.

SECTION OF CELL BIOLOGY BECOMES A DEPARTMENT: DR. JAMIESON IS APPOINTED THE NEW CHAIRMAN

The Yale Corporation has established the Section of Cell Biology, and has appointed Dr. James D. Jamieson chairman of the Department, effective July 1.

Dr. Jamieson will succeed Dr. George Palade, who has been chairman since 1973, when the Section of Cell Biology was established in the School of Medicine with a grant from the Commonwealth Fund. Dr. Palade, who received the Nobel Prize for Physiology and Medicine in 1974, will assume his new appointment as Special Advisor to the Dean of the School of Medicine on July 1.

Dr. Jamieson, well known for his research in the structural and functional correlates of membrane components in epithelial tissues, is an outstanding teacher as well. He came to Yale in 1973 from The Rockefeller University, where he was an associate professor in the Laboratory of Cell Biology, of which Dr. Palade was the head.

Born in British Columbia, Canada, he attended the University of British Columbia in Vancouver, where he received his M.D. degree in 1960. He was awarded the Eric W. Hamber Gold Medal for the highest ranking member in the graduating class, as well as the Horner Gold Medal in Internal Medicine.

In 1966, he received his Ph.D. degree from The Rockefeller University and was a member of the faculty of the Laboratory of Cell Biology there until his appointment as associate professor of cell biology at the Yale School of Medicine in 1973. He was promoted to professor in 1975, and was also appointed professor in the Department of Biology, Yale University in 1979.

Dr. Jamieson has been director of the Yale Medical Scientist Training Program since 1975.

A member of the American Society for Cell Biology, of which he was 1982–83 president, Dr. Jamieson is also a member of the Harvey Society, the American Society of Biological Chemists, and the American Pancreatic Association. He is a member of the editorial boards of Membrane Biochemistry, Blood Vessels, and the Journal of Cell Biology.

NEW CHAIRMAN OF THE DEPARTMENT OF ANESTHESIOLOGY

Dr. Paul G. Barash, professor of anesthesia, has been appointed chairman of the Department of Anesthesiology. He succeeds Dr. Luke M. Kitahata, who will resume his research and teaching activities in the Department.

Dr. Barash's research interests are directed at cardiovascular and respiratory physiology as well as critical care medicine. He has been director of the Surgical Intensive Care Unit at Yale-New Haven Hospital since 1974.

A graduate of City College of New York, he received his M.D. degree in 1967 from the University of Kentucky College of Medicine. Following internship at Kings County Medical Center in Brooklyn, he was a resident in anesthesiology at Yale-New Haven Hospital from 1970 until 1973, when he was appointed assistant professor. He was associate professor from 1978 to 1982, when he was promoted to professor and appointed acting chairman of the Department of Anesthesiology.

Dr. Barash is a member of a number of professional societies including the International Anesthesia Research Society; American College of Chest Physicians; American College of Anesthesiology; American Society of Anesthesiologists; Society of Critical Care Medicine, and the Society of Cardiovascular Anesthesiologists.
A NEW CHAPLAIN IS APPOINTED

Dr. Alan C. Mermann, clinical professor of pediatrics and a distinguished pediatrician in the New Haven area for twenty-five years, has been appointed chaplain of the School of Medicine. Dr. Mermann, who is an ordained Protestant minister, has been actively involved for many years in ethical issues both locally and nationally.

The Office of the Chaplain was established at the School of Medicine in 1967 to support the humanistic needs and interests of medical students. In addition to offering counseling to students, the chaplain also conducts courses on medical ethics. "I hope to bring certain values to the job," Dr. Mermann said. "I will approach it as both a physician and a pastor from a spiritual and behavioral viewpoint."

A specialist in pediatric hematology and oncology, Dr. Mermann received his B.A. degree from Lehigh University in 1943, and his M.D. degree from Johns Hopkins University School of Medicine in 1947. He was an intern both at Bellevue Hospital in New York City and at Johns Hopkins Hospital, and completed his residency at Memorial Hospital in New York. Following military service in Japan as a lieutenant in the medical corps, U.S. Naval Reserve, he was a research fellow at Sloan-Kettering Institute and was ordained a minister in the Congregational Church.

Dr. Mermann has been a partner in private pediatrics practice in Guilford since 1954. Active in civil rights and peace efforts throughout his career, he was a volunteer physician for the Medical Committee for Human Rights. Based on his involvement and observations of the health problems of school children and migrant workers in Alabama, Tennessee and Florida, he was one of a team of physicians who testified before the U.S. Senate on hunger and deprivation among poor children of the South.

He was appointed to the Yale faculty in 1954 as a clinical instructor in pediatrics, and was appointed clinical professor of pediatrics in 1979, the year he received a Master of Divinity degree from the Yale Divinity School.

Y-NNH APPOINTS DR. FENN CHIEF OF STAFF

Dr. John E. Fenn has been appointed chief of staff at Yale-New Haven Hospital, effective March 1. He succeeds Dr. Lawrence K. Pickett, William H. Carmalt Professor of Surgery, who resigned as chief of staff, but will continue as associate dean for clinical affairs at the School.

In announcing the appointment, C. Thomas Smith, president of the Hospital said, "Dr. Fenn's breadth of experience and intimate knowledge of the institution, in conjunction with his commitment to the Hospital, his demonstrated skill and integrity, augur well for Yale-New Haven Hospital. I am very pleased with this appointment."

Born in New Haven, Dr. Fenn is a graduate of Hopkins Grammar School, Dartmouth College and the Yale School of Medicine. He received post-graduate training in surgery at Yale-New Haven Hospital.

Dr. Fenn's specialty is vascular surgery. He has been associate chief of surgery as well as medical director of the operating room at Yale-New Haven Hospital prior to his appointment. A Fellow of the American College of Surgeons, he is a member of the American Medical Association, the Connecticut Medical Society, Connecticut Society of American Board Surgeons, the New England Society for Vascular Surgery and the Pan-American Medical Association.
TWO FACULTY ELECTED TO NAS

The National Academy of Sciences has announced the election of Dr. Joan A. Steitz and Dr. Sherman M. Weissman as two of its 60 new members in recognition of their distinguished and continuing achievements in original research. Election to membership in the Academy is considered to be one of the highest honors that can be accorded an American scientist or engineer.

Dr. Steitz is professor of molecular biophysics and biochemistry. Her research is directed toward understanding molecular mechanisms of gene expression in both bacterial and mammalian cells. The work is focused on RNA molecules, their structures and how they function in processes that result in information stored in genes being expressed in the form of proteins. Recently her investigations have involved the use of auto-antibodies from persons with systemic lupus erythematosus, a rheumatic disease where patients make antibodies against their own cellular constituents.

Dr. Weissman's research has been in the molecular genetics of SV40 (a virus), the human hemoglobin genes and the genes of the major histocompatibility complex. The work has been concerned with the relation between gene structure and the regulation of expression of genes, both in normal and diseased states. Dr. Weissman is professor of human genetics, medicine and molecular biophysics and biochemistry.

NEW FACULTY

Ali A. Khodadoust, M.D., was appointed professor of ophthalmology, effective September 1982. Dr. Khodadoust received his M.D. degree from the Shiraz University School of Medicine in Iran in 1962. Following residency training in ophthalmology at the Johns Hopkins Hospital, he was a member of the faculty at the Wilmer Institute prior to returning to Iran. From 1968 to 1980, when he returned to the Wilmer Institute, he was professor and chief of the Department of Ophthalmology at the Shiraz University School of Medicine. He is internationally recognized for his clinical work and research on corneal transplantation.

Ellen R. Gordon, Ph.D., has joined the Liver Study Unit as a senior research scientist in medicine as of December 1982. Dr. Gordon, a biochemist, is internationally known for her studies of bilirubin metabolism and the effects of ethanol on intermediary metabolism in the liver. From 1966 to 1978 she was on the faculty at McGill University in the Department of Experimental Medicine and since 1978 she has been research associate and professor of medicine at the Mount Sinai School of Medicine in New York City. She has also served since 1980 as scientific director of the Alcohol Research Center at the Veterans Administration Medical Center, Bronx, New York.

Effective February 1983, M. Wayne Flye, M.D., Ph.D., joined the faculty as associate professor of surgery and will be responsible for developing a transplant program. He was previously on the faculties of Duke University and the University of Texas Medical Branch in Galveston. Also as of February, John F. Tallman, Ph.D., was appointed as associate professor of psychiatry. He will direct a research program in the brain biochemistry of major mental illness. He has been at the National Institutes of Health since 1972 and since 1975 in the Section of Biochemistry and Pharmacology, Biological Psychiatry Branch, National Institute of Mental Health, where he was chief prior to coming to Yale.
SEARCH FOR NEW DEAN

Since Dean Berliner will be retiring in June 1984, President A. Bartlett Giamatti has recently appointed a Search Committee which the President himself will chair. The Committee is looking for a nationally recognized leader in medicine or biomedical science with proven ability as a scholar and administrator. It would welcome suggestions from alumni or others of any individuals who would be considered strong candidates for this position.

Nominations and applications should be submitted prior to September 1, 1983. Curriculum and bibliography should be sent to:

Search Committee for Dean of the School of Medicine Yale University Woodbridge Hall 105 Wall Street New Haven, Connecticut 06520

YALE STUDENT ELECTED PRESIDENT OF AMSA

Valerie Stone, a fourth year medical student, is the newly elected 34th National President of the American Medical Student Association (AMSA). She is the fourth woman ever to hold this position, and is AMSA’s first black president. Prior to this position, Ms. Stone was the National Coordinator of Minority Affairs, and also a member of AMSA’s Board of Trustees in 1981 and 1982.

Ms. Stone will take a year’s leave of absence to fill the full-time position of president. She will return to Yale in the spring of 1984 to graduate. She plans to specialize in primary care with a major concentration in pediatric and adolescent medicine, and is committed to improving health care policy.

NOTE: The article on The First Yale Women Medical Graduates on page 10 of the Fall/Winter 1982 issue of Yale Medicine, was based on an article in the Yale Journal of Biology and Medicine (1980), written by Susan Baserga, a third year medical student.

UNIVERSITY COUNCIL COMMITTEE ON MEDICAL AFFAIRS

Two new members have been appointed by President Giamatti to the Committee on Medical Affairs of the University Council. The primary function of this Council is to study the major educational programs and activities of the University and to offer recommendations for their improvement. This work is carried out by the Council’s various committees, each of which has as chairman, a Council member appointed by the President of the University. Committee members are not necessarily Yale alumni — many come from outside the Yale alumni body, often from outside the academic world: but they are all individuals who have particular expertise in the committee’s area of responsibility.

The Committee of Medical Affairs has as its responsibility the School of Medicine, including programs in Epidemiology and Public Health, and the School of Nursing. It is chaired by Dr. William L. Kissick.

Other members of the committee are Mr. Jack R. Aron (B.A. ’28), president of the J. Aron Charitable Foundation; Dr. George A. Carden, Jr., (B.A. ’31, M.D. ’35), clinical professor of internal medicine at Columbia University College of Physicians and Surgeons; Dr. June Osborn, professor of medical microbiology and pediatrics and associate dean of biological sciences at the University of Wisconsin; and Dr. Rozella M. Schlotfeldt, professor of nursing and former dean of the School of Nursing, Case-Western Reserve University.

New members are Dr. Herman N. Eisen, who is professor of immunology at the Massachusetts Institute of Technology, and Dr. Arnold S. Relman, editor of The New England Journal of Medicine.

The Committee held its most recent semi-annual meeting in New Haven on April 14 and 15.

SCHOOL’S BUILDING PROJECTS EARN RECOGNITION

Two recent School of Medicine building projects have received awards. The New Haven Preservation Trust presented a Merit Award to the School for its sensitive rehabilitation and creative reuse of the historic Jane Ellen Hope Building. The oldest building on the School’s campus, the red brick and rough stone building was built in 1902 as a clinic building. Renovations by architects Alexander Purves and Allan Dehar Associates for its use as a teaching facility were completed last fall.

First prize for excellence in consulting engineering in the category of mechanical and electrical design was awarded the School by the New York Association of Consulting Engineers for fostering excellence in engineering of its new chilled water thermal storage system. The firm of Meyer, Strong and Jones, P.C. were mechanical and electrical engineers for the facility which was built to increase the capacity of the Sterling Power Plant in order to provide air conditioning for the Yale-New Haven Medical Center.

Augustus G. Kellogg, director of facilities planning for the School, was responsible for organization and planning of both projects.

THE YALE JOURNAL OF BIOLOGY AND MEDICINE TO PUBLISH THE PROCEEDINGS OF THE INTERNATIONAL ORGANIZATION FOR MYCOPLASMOLOGY

The Yale Journal of Biology and Medicine will publish the Proceedings of the Fourth International Organization for Mycoplasmology, which took place in Tokyo, September 1–7, 1982. The Proceedings will include approximately 60 papers from scientists in Europe, Asia, Africa, Australia and North and South America, concerned with the clinical, epidemiological, taxonomic, molecular biological, evolutionary and immunological characteristics of these microorganisms and the diseases they produce. In addition, about 100 abstracts of posters and brief presentations will be included.
EDITOR VOICES CONCERN
ABOUT DEVELOPING MEDICAL/INDUSTRIAL COMPLEX

"The issue is whether health care is going to become simply a commodity like automobiles or shoes or tomatoes, and whether we are going to treat it as a business and allow the market place to determine the distribution and the cost of health care," Dr. Arnold S. Relman told a group of reporters at a press conference prior to delivering the 1983 Caldwell B. Esselstyn Lecture on "Health Care as Commerce, Medicine as Business: What does Professionalism Mean?" The well-known educator and editor of the New England Journal of Medicine was on campus from March 21 to 23 as the Sixth Caldwell B. Esselstyn Fellow of the Department of Epidemiology and Public Health.

Throughout his visit, in informal meetings and seminars with faculty and students, and in his lecture, he expressed concern, first voiced in a controversial article published in the NEJM in October 1980, about the major trend toward the development of a medical-industrial complex in the United States. "The personal commitment of the doctor to his patient, one on one, and collectively, of physicians to the health and welfare of society, has been weakened or strained by the growing specialization and sophistication of the means of health care," he said.

"Furthermore, the change in the financing of health care with the third party reimbursement system has vastly increased the amount of money being put into the system and the amount of money doctors can earn. These two changes, specialization and third party reimbursement system, have encouraged a kind of commercialism — an entrepreneurialism in medicine we have never seen before. Companies have gone into the health care business because the third party reimbursement system guarantees them a profit and the more special services they provide, the more money they make," he told the reporters. "It is an irresistible opportunity for entrepreneurial capitalism."

In response to a question from a reporter whether he thinks things are better or worse than when he wrote the article, Dr. Relman said flatly, "I think it's worse. The involvement of the medical profession in the commercialism has increased considerably, and there is a third development — a change of attitude on the part of government. As the cost of health care has increased, and as the federal government has reduced its commitment to health care, it is encouraging a medical market place, by treating health care as a commodity as a way of controlling its cost."

In conclusion the NEJM editor told reporters, "We don't know what influence the profit imperative is having on the delivery of health care. Ideally, I would like to see the medical profession take more responsibility for this question. I would advocate that doctors separate themselves totally from any financial interest in the health care industry and accept the principle that they should only gain financially from their own personal services and from overseeing the services of others ... I advocate that the medical professionals regulate themselves. It is imperative that there be careful studies of the effect of for-profit health care on the rest of the health care system."

The Caldwell B. Esselstyn Fellowship was established in 1978 to bring to the Yale community an opportunity for dialogue on social and ethical issues as they affect health and the quality of life. It is the gift of the Esselstyn Foundation to the Department of Epidemiology and Public Health in honor of the late Dr. Esselstyn, Yale Class of 1925, who was a distinguished physician and humanitarian. Previous Fellows have included Dr. Lewis Thomas, Dr. Benjamin Spock, Dr. Edmund Pellegrino, Dr. Charles Scriver and the late Dr. Rene DuBois.

A VIDEOTAPE SERIES ABOUT THE HUMAN VOCAL TRACT

With a series of five videotapes, Dr. Edmund S. Crelin has developed a creative and comprehensive approach to tracing the evolution and describing the anatomy, function and development of the human vocal tract. Published as original research data by Dr. Crelin, who is professor and head of the Section of Anatomy, the series is also intended as teaching material for high school and college biology courses. In addition, it should be of interest to graduate students and professionals in diverse fields such as anatomy, embryology, anthropology, linguistics, speech therapy and singing.

Although they are a part of a series, each of the five tapes is designed to present a separate subject: the adult vocal tract; structural development; functional development; structural evolution; and functional evolution. Narrated by the author, they include not only drawings and models but also as much live action as possible.

To simplify descriptions of how they function, Dr. Crelin made rubber copies of the vocal tracts. One, using a plastic larynx and air under pressure, is the first copy ever made that produces vowel sounds by the same process used in living adults.

In the tape on structural evolution, replicas are shown of nearly all of the fossil skulls of human ancestors from 5,000,000 to 30,000 years ago. Dr. Crelin demonstrates how he used skull base anatomy to reconstruct the vocal tracts of human ancestors and trace their lineage to present day humans. It is noted that the development of the human vocal tract between three and six years of age is a synopsis of what occurred during human evolution between 1,000,000 and 50,000 years ago.

Through the use of reconstructed functional vocal tracts and fossil skull replicas, the tape on functional evolution demonstrates that the evolution of the vocal tract is related to the development of the frontal lobe in the human brain. In this tape Dr. Crelin offers the hypothesis that speech sounds first became language, which in turn led to abstract thought.

Further information about the tapes, which run approximately 30 minutes and cost $200.00 each, may be obtained from Videoplay Systems, Inc., Tolland Industrial Park, P.O. Box 800, Rockville, CT 06066; phone: (203) 875-5211.
FRY COLLECTION ON VIEW IN LIBRARY

Works by Peter Breughel, Rembrandt van Rijn, and Charles Addams are among those featured in "A NEW LOOK FOR OLD MEDICAL PRINTS," an exhibit currently on view at the Yale Medical Library. The exhibit, subtitled "Conservation, Microphotography, and Microcomputers in the Clements C. Fry Collection," was organized to introduce and explain a new system, developed at the Library to facilitate and enhance the cataloging, preservation, and accessibility of special museum collections. Combining the technologies of microimage photography with microcomputers, the system is the first of its kind to be applied in a library or museum environment. Its development and application was made possible through a gift from Hoffman-La Roche, Inc.

The Clements C. Fry Collection, bequeathed to the Medical Library in 1955, is one of the great collections of art related to medicine. Its 2000 prints and drawings present artists' views of the practice of medicine over four centuries. "For many years, the collection has not been easily accessible to scholars, and its preservation has been a serious concern," said Susan Wheeler, director of the project and preparer of the exhibit. "Our purpose was to develop a practical, low-cost method for creating full access to the collection, while at the same time, preserving it and maintaining its security. The project represents a successful collaboration among specialists in diverse areas, some of whom have never applied their expertise to museum or library problems."

To facilitate the cataloging and consolidation of records in the Fry Collection, Dr. David Stagg, Director of the Biomedical Computing Unit, developed and wrote a flexible database management system, which makes available for the low-cost microcomputer some of the features of sophisticated programming which have previously only been available for larger computer systems. The program provides for 43 categories of information to be recorded for each item in the collection, together with retrieval of a print or drawing by any category.

A method of visual access to the collection was devised by William Guth, Director of Communications Media in the School of Medicine. Color microimages of each item in the collection now permit scholars to view rapidly all, or a portion of the collection without compromising the security or preservation of the fragile originals.

Conservation was a major part of the two-year project. Time, exposure to sunlight and air pollution, and chemical interaction of various papers and mounts had caused a number of the prints to be on the verge of destruction. Jane Greenfield, Conservator of the University Library, supervised the preservation and restoration of several hundred of the prints, examples of which are on view.

The exhibition is designed to demonstrate some of the problems of maintaining small collections, together with practical solutions to those problems. It also reintroduces an important resource to the community. "Historical research, using art as a source, is dependent upon collections such as the Fry Collection. From historical graphic representations, it is possible to learn about the customs and practice of the past," Ms. Wheeler noted.

FESTSCHRIFT HONORING DR. HORSTMANN PUBLISHED BY THE YALE JOURNAL

Dr. Dorothy M. Horstmann, John Rodman Paul Professor Emeritus of Epidemiology and Pediatrics, was honored at a party in June 1982, given by her many friends and students; manuscripts of a group of papers written in her honor were presented to her on that occasion. These papers have now been published in a special 230 page issue of The Yale Journal of Biology and Medicine (Volume 55, No. 3–4). The distinguished authorship, which reflects the high regard in which Dr. Horstmann is held throughout the world, includes 35 papers concerned with virology, ranging in scope from epidemiology to molecular biology. Additional copies are available at $24.95. These can be ordered from The Yale Journal of Biology and Medicine, 333 Cedar Street, New Haven, CT 06510.

FACULTY NEWS

At its annual meeting on April 26, the Greater New Haven Chamber of Commerce presented its Community Leadership Award for 1983 to Dr. James C. Comer, Maurice Falk Professor of Psychiatry, Child Study Center and associate dean of the School of Medicine. In announcing the award the Chamber stated, "Dr. Comer's contributions to this area have been most significant. He has been directing a project for the Yale Child Study Center in cooperation with the New Haven Public School systems; he has been a consultant to other school systems in the area. The results of the project he has led have constituted a success story now being copied in many other cities."

Dr. Xandra O. Breakfield received a McKnight Neuroscience Development Award in support of her research on "The Biochemical Component of Memory: Locating the Gene Responsible for Familial Alzheimer's Disease." The Foundation established the awards to advance research in neuroscience especially as it pertains to memory and to a better understanding of disorders affecting memory and its biological substrates.

Dr. Joseph S. Fruton and Dr. Robert Jay Lifton are among 292 scholars, scientists and artists awarded John Simon Guggenheim Fellowships for 1983. Dr. Fruton, who is the Eugene Higgins Professor Emeritus of Molecular Biophysics and Biochemistry, will work on studies in the history of biochemical sciences; Dr. Lifton, the Foundations Fund for Research in Psychiatry Professor of Psychiatry, will continue research for a book on the Nazi holocaust and nuclear threat.

The American Society for Microbiology presented the 1983 Becton-Dickinson and Company Award in Clinical Microbiology to Dr. Gueh-Djen Edith Hsiung for her outstanding contributions to the field of diagnostic virology. The award honors a distinguished microbiologist whose research accomplishments have led to important clinical microbiology applications. Dr. Hsiung is professor of laboratory medicine and chief of the Virology Laboratory at the Veterans Administration Medical Center, West Haven.
Three School of Medicine scientists have received research grants from the American Cancer Society. They are: Dr. George Miller, the John F. Enders Professor of Pediatric Infectious Disease and Epidemiology, who received a grant in support of his research in the molecular mechanism of viral transformation and oncogenesis; Dr. Ravinder Nath, associate professor of therapeutic radiology, who has been awarded a grant to compare the effectiveness of Americium-241 gamma rays with Radium-226 gamma rays in the treatment of gynecological cancers; and Dr. Richard Peschel, assistant professor of therapeutic radiology, whose grant will support his study of the underlying radiobiology which occurs in tumors treated with continuous low dose rate of irradiation.

Dr. Mark Cullen has been selected as a Henry J. Kaiser Family Foundation Faculty Scholar in Internal Medicine. Dr. Cullen is director of the Yale Occupational Medicine Program and of the General Occupational Health Clinic, and co-director of the Occupational Lung Disease Clinic at Yale-New Haven Hospital.

The Professional Division of the American Association of Publishers has awarded the 1982 prize for the most outstanding book in the behavioral sciences to Father and Child, edited by Dr. Alan Gurwitt, associate clinical professor of psychiatry, Child Study Center, Dr. Stanley Cath, and Dr. John Ross. The award was based on contribution to the field and design of the book, which was published by Little, Brown and Company.

In Washington, D.C. on May 24, Dr. James L. Boyer and Dr. Harold O. Conn, participated in "Meet the Researchers Day," sponsored by the American Liver Foundation to familiarize the general public with progress in research in the treatment of liver diseases. Dr. Boyer, professor of medicine, is director of the Liver Study Unit at the School of Medicine, and Dr. Conn, also a professor of medicine, is chief of the Liver Unit at the Veterans Administration Medical Center in West Haven.

Dr. Peter Jatlow, professor of laboratory medicine and psychiatry, has been elected president of the Academy of Clinical Laboratory Physicians and Scientists (ACLPS) for 1983—1984. ACPLS is primarily concerned with teaching and research in laboratory medicine. Dr. Jatlow has also been appointed to the Clinical Chemistry Test Committee of the American Board of Pathology.

The Academy of Laboratory Physicians and Scientists awarded the Gerard T. Evans Prize to Dr. Joseph Bove, professor of laboratory medicine, for "his outstanding contributions to the science and clinical discipline of laboratory medicine, and with gratitude of the many academicians in laboratory science whose careers were initiated and enriched by his guidance." Dr. Bove is internationally recognized as an expert on the scientific and clinical aspects of blood transfusion, and is co-author of one of the major textbooks on this topic.

The School of Medicine has been selected as one of five institutions to participate in the third Mental Health Research Network on Risk and Protective Factors in the Major Mental Disorders. The network which is sponsored by the John D. and Catherine T. MacArthur Foundation brings together internationally recognized investigators from the fields of psychiatry, psychology, biology, genetics, epidemiology and sociology to examine risk and protective factors in patients with schizophrenia, antisocial personality disorders, and affective disorders such as depression and manic-depressive illness. Dr. Myrna M. Weissman, professor of psychiatry, and Dr. Donald J. Cohen, professor of pediatrics, psychiatry and psychology have been named to lead research projects for the network at Yale.

Raymond Yesner, professor of pathology, delivered the WHO Lecture at the 72nd annual meeting of the International Academy of Pathology on March 1. His topic was classification of lung tumors. He also addressed the Arthur Purdy Stout Society of Surgical Pathologists on small cell tumors of the lung.

Dr. George Palade received an award from the Yale Science and Engineering Association. The award was presented to the distinguished professor and chairman of cell biology at the Association's annual meeting on April 6.

BOOKS BY FACULTY

"Working with Disadvantaged Parents and Their Children." By Sally Provence, professor of pediatrics, Child Study Center; and Audrey Naylor, assistant clinical professor of social work. Child Study Center, Yale University Press (New Haven) 1983. 192 pp.


"Basic Neuroradiology". By Mohammad Sarwar, M.D., associate professor of radiology: Behrooz Azar-kia, M.D.; and Solomon Batnitzky, M.D., Warren H. Green Inc. (St. Louis) 1982.
EDWARD H. STORER, M.D.

Edward Hammond Storer, professor of surgery and associate dean, died on February 21st, while cutting firewood on his wood lot in Guilford. A subdural hemorrhage led to his sudden and untimely death.

Ed was a gentle man in every sense of the word. Born in Rockland, Maine, in 1921, he embodied all of the fine qualities that have long been associated with the descendants of his staunch New England forebears.

Hardworking, honest and forthright in his dealings with associates and friends — compassionate with those in need, and a keen sense of duty to the many who relied on him in so many different ways.

Ed was a man of very few words but penetrating thoughts — preferring to express his views and values by the way he conducted his personal life — a life lived with integrity, generosity and devotion to his family.

He received his undergraduate education at the University of Chicago where he held an Honor Scholarship and remained there to complete his medical studies in 1945.

Perhaps the one phase of Ed’s professional life of which he was most proud were the years spent in the laboratory of the great Lester Dragstedt at the University of Chicago Clinics from 1943 to 1950. It was during this time that his strong interest in scientific research was awakened and played a significant role throughout the remainder of his life.

There at Chicago, in collaboration with Dr. Dragstedt, the pioneering work on the role of the vagus nerve in gastric secretion was carried out and led to a totally new concept in the surgical management of peptic ulcer disease, which remains predominant today.

These were “heady” times for this young academic surgeon, in more ways than one. For it was there that he wooed and wed Dorothy — his wife of thirty-eight years.

On leaving Chicago in 1952, the Storers moved to Seattle and the University of Washington, where they fell in love with the Great Northwest. Their stay in Washington, was cut short however, by an invitation from another distinguished surgeon, Dr. Harwell Wilson, to join the faculty of the University of Tennessee in Memphis, as an assistant professor of surgery anddirector of the Surgical Research Laboratories in 1955.

His research productivity continued unabated while at Tennessee, publishing 19 scientific papers and a textbook of surgery during the following ten years. His many contributions earned him a full professorship in surgery and a joint appointment in the Department of Physiology and Biophysics.

Yale was fortunate, in 1959, when Ed accepted our invitation to join the faculty as a professor of surgery and serve as chief of surgical services at the West Haven Veterans Administration Hospital, where he subsequently assumed the additional roles of chief of staff and associate dean. Even in the face of these administrative burdens, he continued to make fundamental contributions to our knowledge of gastrointestinal physiology through his many publications. Since 1969, Ed was editor of the textbook, Principles of Surgery — probably the leading textbook of surgery in the world and currently in its 4th printing.

While Ed enjoyed his professional work immensely, he was a man of many and varied interests. His fine bass singing voice, which so few of us were privileged to hear, was put to good use from time to time in singing madrigals and was a reflection of his abiding love of good music.

His skills with tools of all kinds and flair for woodworking enabled him, with Dorothy’s careful supervision, to convert the old Post Office in Sachem’s Head to a charming home where guests were treated to the Storer’s warm and gracious hospitality.

High on his list of pleasures was a good round of golf on the Yale Course, where he achieved a respectable handicap and was known to occasionally pick up a tournament prize.

One of his most remarkable achievements, at least to his contemporaries, is one he shared with Dorothy when they both passed the qualifying tests in scuba diving, and as recently as four weeks ago he and Dorothy were exploring the mysteries of the Caribbean Sea at a depth of 150 feet off Bimini Island.

There is much, much more that one could say about Ed, but he of all people, would want this to be brief.

I must say we’ll miss Ed and his bright bow ties so lovingly designed by Dorothy and we are all grateful for the way this fine man enriched our lives.

J.W.C.

SUSAN C. ALTSHUL, M.S.N.

Susan Cleveland Altshul, assistant clinical professor of nursing and psychiatry, died April 1, 1983 after a long illness. Mrs. Altshul was born May 9, 1941 in Norwood, Massachusetts and attended elementary and high schools in the Boston area. She graduated from Skidmore College with a B.S. degree in nursing in 1963 and worked for two years as a nurse and an instructor of nursing as a Peace Corps Volunteer in Turkey. Upon her return from Turkey, Mrs. Altshul worked for the Visiting Nurse Association of Boston for two years.

She came to Yale in 1967 and in 1969 received a M.S.N. degree from the School of Nursing. From June 1969 until her death Mrs. Altshul was a clinical specialist (in psychiatric nursing) on the staff of the Mental Hygiene Clinic at the West Haven Veterans Administration Medical Center. She established and directed the Continuing Care Division of the Clinic and assumed responsibility for the coordination of the treatment provided patients with chronic, disabling psychiatric difficulties. To this work Mrs. Altshul brought energy, true caring, an inquiring mind, and an interest in teaching others how to do what is easily seen as unrewarding treatment. She participated actively in a variety of research projects and presented at a number of professional conferences. In addition to her contributions to the Mental Hygiene Clinic, she was a valued member of the Nursing Service at the Veterans Administration Medical Center, and was involved in consultative and teaching activities throughout the Medical Center.

Mrs. Altshul is survived by her husband, Victor Altshul, an associate clinical professor of psychiatry, and by two children, Jonathan and Katherine.

Contributions in her memory may be made to the Susan C. Altshul Fund (by check payable to “Veterans Administration Medical Center,” sent c/o Paul Errera, M.D., Chief, Psychiatry Service, VAMC, West Haven, Connecticut 06516). G.S.G.

The foregoing tribute was presented by Dr. Jack W. Cole at a Memorial Service for Dr. Storer in Dwight Chapel on February 24, 1983.
NEW CHALLENGE GIFT FOR THE ALUMNI FUND

In the spring of 1982, announcement was made of Dr. Leona Baumgartner’s challenge gift to encourage new and increased contributions to the Medical School Alumni Fund and the Public Health Alumni Fund for student loans. Dr. Baumgartner pledged $75,000 for the Student Revolving Loan Fund, provided that a further $150,000 in new money was given by medical and public health alumni and friends of the School — a one-for-two match. The response was impressive, and as of December 1982 the $150,000 in new money had been raised to qualify for Dr. Baumgartner’s $75,000 gift.

Dr. Baumgartner has now offered a new challenge gift of $50,000 for the Student Revolving Loan Fund provided that an additional $150,000 in new money is contributed. Thus every dollar that you give to the Medical School or Public Health Alumni Fund above what you gave the previous year will now be matched one-for-three. If you made no gift last year, your contribution this year will be matched one dollar for every three.

If Dr. Baumgartner’s new challenge is met, the much needed funds for additional student loans will be significantly increased. We hope that all of our medical and public health graduates will respond to this magnificent appeal.

THE ALUMNI IN MEDICINE COLUMN

Notes from the President
Nicholas P.R. Spinelli, M.D.

Alumni Directories/Alumni Directions
The process is in progress. At this writing 4,210 questionnaires have been mailed to graduates of the Yale School of Medicine; 1,955 to graduates of Epidemiology and Public Health; 1,446 to members of Grace-New Haven and Yale-New Haven Hospital house staff; 477 to post doctoral fellows; and 147 to the relative newcomers among Yale graduates in the medical disciplines, the physician associates. The primary message of this communication (like that accompanying the questionnaire) is: Please complete and return it promptly, preferably on receipt.

For those delinquent, one repeat mailing will be forthcoming. It is frustrating to be presented a deficient directory or an inaccurate one; yet a satisfactory conclusion is contingent on everyone’s cooperation and performance. Enough said, almost.

The occasion does provoke rumination and questions: inquiry into the mission, the purpose of our alumni organization; questions of purposes to be served by our planned directory. Will it serve as a tool to guide us to new or possible future directions? Does it pose “possibilities” otherwise unseen?

The inquiry, of course, illuminates the fragile structural nature of the Association of Yale Alumni in Medicine. The heart of its purpose remains the quinquennial return to New Haven for reunion, that tribal and ritual tradition whereby we nourish a need to replenish our energies at their remembered source. The Executive Committee of our Association functions largely to provide contact and definition for our reunion weekends each year. It is a focus as well for the review and tallying of our fund raising activities. In recent years these have grown from token gestures to more passionate statements of affirmative support for increasingly needy students. This response has been a touching and impressive one, and revealing two of our organization’s spiritual structure. About half of our graduates include their school in these concerns; perhaps the other half address similar concerns of other institutions. Those addressing Yale Medical and Public Health Alumni Funds have been increasingly generous.

Our Directory shall, of course, be a geographic guidepost for professional reference and consultation. But in a time when we stand on the threshold of great change in health care delivery, the fragmentation of Yale-degree professionals to be traced makes our reference source more diverse and challenging. Our graduates with M.D., Ph.D., and Public Health degrees will answer three different questionnaires. Our trip through the directory maze of the future may be more complex and multipurposed than that of the past. In answering the question of who your Yale neighbors are, our Directory poses the challenge of regional organizational development. The provinces have been heard from, those interested in such endeavors are there. The potential for their flourishing must be allowed to materialize. Should these ventures take root, the strength and breadth of our organization will have broadened structurally to a meaningful degree in the decades ahead. Education in medicine, as in all fields, faces financial stress so clearly defined in the future. For the 50% who have manifested their concern for the survival of quality private education (as was provided them), access to a regionally structured alumni group would render the School’s current activities more immediate, available, and involving. With a broadening of alumni organizational structure in this manner, the opportunity for addressing these supportive acts, be they financial or intellectual, which are the essence of positive alumni involvement, would be greatly enhanced. It would also provide the faculty and School administration an opportunity for continuity of a relationship equally meaningful to them. Possibilities for maintaining continuing education bonds exist. Political, economic, social spin-off come readily to mind. There are so many possibilities.

May the Directory be a way for the Yale student in medicine to seek counsel and direction? To those alumni close to New Haven and fortunate enough to have the opportunity to meet

continued on the next page
Notes from the President — continued
the student of the 80’s, one must rank this as a “possible direction.” Their responsiveness to even superficial attention is disarming and provocative. To know them, however briefly, is to know that they are the best and the brightest. Their “Yale espirit” in the past few years is outstanding in my remembered time. Class spirit is achieving renaissance and is so evidently psychologically sustaining. However superficial the opportunity for an alumnus to interact with today’s student, one is quick to realize the universality in time of the student experience: the inevitable evolution of role-models among faculty; the vital cohort-bonding which produces such a necessary psychologic support system, never more important in these times of more intense student stress. Sharing with them the remembered student anxieties of whatever era in time is so immensely reassuring to them and of value. An interface between student and alumnus is difficult to achieve because of time constraints bilaterally, but it can be productive. To observe them is to remember ourselves, to recognize the beginnings of our own professional matrix. It is to this constant, renewing environmental source which we return then, quinquennially, in our Spring.

So again we ask you to respond to the Directory mission: for our organization, present and future; for its directions; for its possibilities.

1922
In June 1982, on the occasion of her 90th birthday, Helen Langner was guest of honor at the Milford (Connecticut) Medical Society meeting held at the Milford Yacht Club. An active member of the Milford Hospital Medical Staff, Dr. Langner was recognized for her 60 years of practice in the field of psychiatry both in Milford and for many years in New York City.

1923
The 1982 Maxwell Bogin Lectures were held on October 20. The series of lectures held each fall, deals with current topics in pediatrics and is structured to appeal to a wide audience interested in child healthcare. They were established in 1978 by the Pediatrics Department of Bridgeport (Connecticut) Hospital and sponsored by the friends and former patients of Maxwell Bogin who was chief of Pediatrics at Bridgeport Hospital from 1949 to 1986. He was co-founder of the Children’s Medical Group from which he has since retired and is former president of the Hezekiah Beardsley Pediatric Society and former state chairman of the Connecticut Chapter of the Academy of Pediatrics.

1927
News received last fall, but too late to appear in the fall/winter issue of Yale Medicine, was that Albert Jablonsky, having retired in June 1982 after more than a half-century of private practice in Jeannette, Pennsylvania, was honored in a very special way by the city which he had served for so many years.

Dr. Jablonsky not only served the health needs of the people of Jeannette but was active in community affairs. Shortly after World War II, he was among a group of community leaders who foresaw a need for a community hospital in Jeannette. In 1947 he was elected to the first executive board that directed the organization of planning and fund-raising for the proposed hospital which was to be erected as a “living memorial” to veterans of all wars. Having had an engineering as well as a medical degree, Dr. Jablonsky drew up the original plans for the 99-bed hospital and later served as chairman of the building committee. When the new Jeannette District Memorial Hospital opened in 1959 under the operation of the Sisters of Charity, Dr. Jablonsky was elected the first president of the medical staff. Although now retired from practice, he still holds staff positions at both Westmoreland Hospital and Jeannette District Memorial Hospital.

In an official mayor’s proclamation which cited Dr. Jablonsky’s “unselfish dedication and humanism toward his fellow man,” during his 54 years of medical practice, November 5, 1982 was designated as “Dr. Jablonsky Day” and a testimonial dinner was attended by his many friends, former patients, co-workers, hospital associates and civic leaders. In addition to numerous proclamations, resolutions, and plaques presented in tribute to Dr. Jablonsky and his work, he and Mrs. Jablonsky received a special gift of appreciation—a promise of a trip for two “anywhere they want to go, at any time they want to take it.”

1929
A note from Paul McAlenney reported that Frank D’Andrea had spent several months in Papua, New Guinea on a volunteer medical service program. He noted that Frank has retired from anesthesiology in Stamford, Connecticut to his Strawberry Hill Farm in Shoreham, Vermont, but that each year he contributes his services as an instructor and anesthesiologist at some remote area hospital.

Russell Scobie of Newburgh, New York, who retired after 50 years of active practice of pediatrics on June 20, 1982, has received a number of new honors during the past year. A proclamation by the Mayor of the City of Newburgh on February 19, 1982 noted, in part: “The City of Newburgh is proud of Dr. Russell B. Scobie, who has not only distinguished himself as an outstanding pediatrician, but has positively affected the health of our entire community and been an ambassador of good will for our region. Dr. Scobie’s dedication and commitment have become hallmarks of quality and service and we are pleased that his alma mater has honored Dr. Scobie with the Yale Medal; that he has received the Joseph B. Goldberger Award in Clinical Nutrition from the American Medical Association; that our regional New York State Public Health Association has recognized him with its Distinguished Service Award . . . . .”

In October 1982, the American Academy of Pediatrics selected Dr. Scobie for a special recognition award “for his pioneering and sustained efforts in promoting community water fluoridation throughout the world.” Having been instrumental in initiating the first mass fluoridation system, the now famous Newburgh–Kingston Water Fluoridation Study in 1945, he subsequently gained an international reputation in connection with the use of fluoride to reduce dental cavities. The
award was made at a luncheon meeting attended by about 1000 people in New York City.

Most recently Dr. Scobie received the 1983 Newburgh Jaycees Distinguished Service Award at a dinner on March 5 attended by 200 friends and neighbors. The local newspaper quoted Russ Scobie as follows: "I think that if I had to write about myself, I'd title the book after the old T.V. series 'I Led Three Lives.' The three lives I would chronicle deal with my work in pediatrics as a physician, my work for the Yale Alumni Association, and my pet project, educating others as to the importance of water fluoridation."

1932

Myron Wegman, dean emeritus of the School of Public Health at University of Michigan, gave a principal address on the occasion of The Pan American Health Organization’s 80th anniversary in Washington in December.

1935

Samuel Kushlan retired in June 1982 as associate physician-in-chief, Yale-New Haven Hospital, a position which he held for 15 years. A most rewarding aspect of those years was his close contact with the resident staff who impressed him not only as very bright, but also compassionate, intelligent, and thoughtful. Although hesitant to admit it, Sam feels that there must be a great many other such fine young men and women all over the country and throughout most of the world, giving him much more hope about the future than the media would lead one to believe.

Sam is continuing his association with Yale-New Haven Hospital as a consultant to the chief of staff, a position in which he hopes his accumulated experience of 51 years in and around Yale-New Haven Medical Center will be useful and productive. He will continue to hold his faculty appointment as clinical professor of medicine. Among his other activities, he continues as co-chairman of the Yale Medical School Bequest and Endowment Program and welcomes your input and support in this crucially important area. Sam is also a member of the Advisory Committee on Investor Responsibility, a committee of the Yale Corporation.

1936

George Hahn wrote: "After practicing and teaching for almost forty years in the Philadelphia area, I decided to migrate to the Eastern Shore of Maryland." He now resides in Royal Oak, Maryland and is serving as tumor consultant at the Peninsula General Hospital, a 450-bed institution with a newly dedicated radiation therapy unit, which includes an 18 million volt electron beam machine and a 6 million volt (photon) machine and a versatile simulator. He has also been appointed consultant in gynecology, oncology at the 240-bed Memorial Hospital in Easton.

Dr. Hahn has been a director of the Yugoslavia-United States Medical Association since its inception about six years ago, and at the time of his writing, was planning to go to Sarajevo, Yugoslavia to attend the Third Scientific Meeting of the Association where, in conjunction with a gynecologist from Yugoslavia he was to moderate a session on neonatology.

Dr. Hahn also noted: "I am enjoying serving as class agent since it enables me to renew contacts with my medical school classmates. I have heard from Al Diddle on a number of occasions; he is in the process of retiring from his practice in Knoxville."

1938

Roy Barnett was honored on the occasion of his retirement on June 30, 1982 after thirty-five years of service as chairman of the Department of Pathology at Norwalk (Conn.) Hospital. Over the years, he has earned the affection and respect of all who know him. At a dinner in his honor, he was given recognition for his many accomplishments during his distinguished service to the hospital, and it was noted that under his energetic and untiring leadership, the department has grown to a team of more than ninety professionals in seven laboratories conducting a multiplicity of tests — half a million a year — to help identify and arrest disease.

Among his many innovations are his initiation of Norwalk Hospital’s first educational scientific conferences for the medical staff; his inauguration of the hospital’s first residency program providing post graduate specialty training for physicians; his establishment of a school of medical technology; and his introduction of computer processing to speed access to patients’ laboratory data.

Dr. Barnett, a resident of Westport, has also retired from his position as clinical professor of pathology at Yale.

1939

Arthur Tucker writes that he has retired as professor of radiology at the University of Michigan and has moved to Colorado. He is still active, however, in practice and teaching at the Fitzsimmons Army Medical Center, where he is pediatric radiologist. He and his wife, Gale, live at 12339 E. LaSalle Place, Aurora, Colorado 80014.

1940

It’s high time to sharpen progressively dulling wits and my pencil to see what can be accomplished by this attempt to put a newsworthy column together. My thanks to Jim Ferguson for making it possible. I did receive a letter from Crawford Campbell dated (I shudder) September 21, 1982, telling me of his current hormone therapy for a prostatic malignancy, diagnosed last spring. There has been a good response to therapy; Christmas card contact in mid-December was lacking in further information. Crawford had seen Jim Flett’s sister, Mary, sometime back; she was hoping to set up a scholarship in Jim’s name, but plans had not as yet been completed. A letter from Champ Taylor in August indicates his retirement as of July 1st last. He spent July and August at his retreat near Hot Springs, Virginia, enjoying the “easy life”. Two later letters from Champ state that he had open heart (by-pass) surgery in April 1981 and continues to do well. Another letter reported that Jack Haley’s second daughter had died from a rapidly fulminating unusual form of malignancy. I would like to express sincere sympathy to Jack and his family in the name of 1940ers. A word about Jim Ferguson who keeps me informed about some of you, but he too is in the dark about many of our class who have chosen to remain silent. He and Iz were about to depart for South America (he didn’t say where or why; maybe to jog in the Andes, or perhaps because it’s summer down there). He reports favorably on his brush with prostate mitotic activity (his euphemism). Helen Haury Woods has written Jim from Texas with
news of her husband, Dick, and his problem with chronic hepatitis, requiring a shunt. Follow-up letters in November were encouraging. Helen writes so enthusiastically about "their island" and the plethora of birds, some unidentifiable. Sounds idyllic. Her four children are in the East — one at State University of N.Y., one at Mt. Sinai in the Pediatrics O.P.D., and one at University of Massachusetts. Her son is in Chicago working on a "fuel-cell project." A note from Jack Blaisdell states that he now has given up surgery and hospital work, confining his medical activities to "minor trauma, office orthopedics, consultations, and second opinions". He has eight grandchildren "with no end in sight". Maury Ross has retired, but still lives in Saco, Maine. (I'm ashamed to say he lives very close to me, but I never get to Saco and hence haven't seen him since our 40th.) He has become involved with community services, such as child abuse programs, mental health, and Physicians for Social Responsibility. He says he is doing well though being treated for chronic lymphatic leukemia. He and Ellen were planning to go to Florida for the months of February and March. Joe Sokal is still at Duke, and enjoying North Carolina and his current project, "an international cooperative study of chronic myeloid leukemia". This project has involved travel to Bologna, Barcelona, Lyon, etc. Joe reports that #1 son is at the C.D.C. in Atlanta; #2 son has one more year to go with the U.S.P.H.S., operating the only Indian medical clinic in Texas. Norm Sears sent a long letter to Jim from Napa, California; he says he feels "pretty young" most of the time, except for some hypertension and retinal problems. He and other family members had large salmon catches out on the Campbell River in British Columbia late last summer. Norm reports the "class baby," his first son, is now 46 and very successful. His second son, Jim, is at Univ. of Massachusetts in Marine Botany. His third son lives in Beverly, Mass., and has a fascinating life involving music — composing and manufacturing flutes. Norm and his wife, Ty, may soon be returning to the Palo Alto area. Wy Dean and Biddy took a trip to Italy in July, returning to familiar stomping grounds. Wy reports the sudden onset of a neurological problem of vascular origin involving the right frontal lobe. Check-up at the Mayo Clinic produced a "clean bill of health". He was about to leave for Sanibel Island in Florida as of early January. Hank Humphrey is still actively practicing in Ithaca, and for the first time is talking about retiring "in a year or two". (I'll believe it when I see it!) Hank sent a fascinating review of a case he handled—a schizophrenic who performed a Caesarean section on herself with a pen-knife. She sutured the incision, walked down town with the premature infant strapped to her back, and was then picked up by a police officer who took her to the local hospital. Needless to say she was subsequently transferred to a psychiatric institution. I hope this doesn't start a new trend in obstetrics! If allotted sufficient space I would send to all 1940ers the article from the Hartford Hospital entitled "A Roast for Ronny" on the occasion of Ron Beckett's retirement from the Department of Pathology at Hartford. The "roast" was given by one of his former residents. It is a glorious but side-splitting tribute to Ron, a delightful characterization. I honestly doubt Ron has really retired; he is so engrossed in his nomenclature project. Jim Ferguson had a communication from Lee Sannella regarding "his interest in clarifying energetic states active in people today". My background in mundane things like child-bearing precludes comprehension of many facets of Lee's activities. He is also one of the directors of the Aesop Institute in Sebastopol, California, concerned with research in energy. Such widely diversified endeavors boggle the mind, at least my mind. Your class secretary's life in Maine goes on in an uneventful, non-medical sort of way. Thus far the winter has seemed like autumn with unseasonably warm days. It makes one feel like indulging in a few hot toddies. Your class secretary's mind. Your class secretary's life in Maine goes on in an uneventful, non-medical sort of way. Thus far the winter has seemed like autumn with unseasonably warm days. It makes one feel like indulging in a few hot toddies. Your class secretary's mind. Your class secretary's mind. Your class secretary's mind. Your class secretary's mind. Your class secretary's mind. Your class secretary's mind. Your class secretary's mind. Your class secretary's mind. Your class secretary's mind. Your class secretary's mind. Your class secretary's mind. Your class secretary's mind. 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1945
In honor of his contributions to college and university health, Isao Hirata, Jr. received the Edward Hitchcock Award at the 60th meeting of the American College Health Association. An authority on sports medicine, Dr. Hirata had been a member of the faculty at Yale until 1972, when he joined the staff of the University of South Carolina as director of Student Health Services.

1946
Aaron Beck received the honorary degree, Doctor of Medical Science (D.M.S.), at Brown University’s 214th Commencement last May. Dr. Beck, a psychiatrist, supports a psychiatric discipline which he calls cognitive therapy — a theory which for many years was met with resistance of others in his field, but which is now being used by many mental health professionals.

Cognitive therapy begins by treating what had been considered more a symptom than an underlying problem — a patient’s unrealistically negative views of himself. As the patient gradually accomplishes a range of tasks which have been set up by the psychiatrist for him to do, he is made aware of his distorted, negative self-views.

Dr. Beck, an alumnus of Brown having received his A.B. in 1942, now resides in Wynnewood, Pennsylvania.

1949
Richard Barach was elected to fellowship in the American College of Radiology at its annual meeting in September. Dr. Barach resides in Princeton, New Jersey and is affiliated with the Medical Center at Princeton and the Carrier Foundation in Belle Mead, New Jersey.

1950
Norman Loux, in 1955, together with other physicians and citizens committed to the development of psychiatric and mental health services for their immediate area, founded the Penn Foundation for Mental Health, Inc. in Sellersville, Pennsylvania. Dr. Loux is senior psychiatrist at the Foundation which received the Good Neighbor Award from the Pennridge Chamber of Commerce. In presenting the award, the Chamber of Commerce expressed its appreciation to the Foundation and noted that "the excellent service of Penn Foundation for Mental Health has enriched the mental health of the entire community."

1951
Daniel Freedman, chairman of the Department of Psychiatry at University of Chicago, was awarded the honorary Doctor of Science degree by Indiana University in May 1982. Dr. Freedman is an internationally acclaimed leader in psychiatric medicine and research. In the 1950's he was involved in the development of new areas in psychopharmacology and in the 1960's he discovered the link between hallucinogens and the metabolism and disposition of serotonin in the brain. He has made important advances in the integration of basic and clinical disciplines in psychiatry and has brought the resources of psychiatry and medicine to bear on the public health issues and problems of drug abuse. He has had significant influence in legislative and policy issues affecting the use and abuse of psychotropic drugs.

Dr. Freedman served as the 110th president of the American Psychiatric Association during 1981–82. His presidential address, "Science in the Service of the Ill" was published in the September 1982 issue of the American Journal of Psychiatry.

1952
The American College of Surgeons has elected Jose Felix Patino of Bogota, Colombia an honorary fellow; the award was conferred in October. It is distinctly unusual, and may be unique, that a surgeon who is already a fellow of the College, has received in addition, an honorary fellowship.

The citation stated in part: "The American College of Surgeons, moreover, is greatly in debt to Dr. Patino for his numerous services. His long-standing membership on the International Relations Committee, his deep concern over the selection of International Guest Scholars, and his current role as ACS governor for Columbia are all evidence of his great interest in College affairs." It further noted that "Dr. Patino is a tireless worker, a superb surgeon, a concerned husband and father, and truly a gentleman. He stands as a stellar example of the significant role of physicians in improving international relations."

1956
William Hindle wrote from Honolulu that he has been appointed chairman of the National Task Force on Studies on Techniques for Assessment of Clinical Competence. This task force of the American College of Obstetricians and Gynecologists is to evaluate ongoing quality assurance both of individual physicians and departments of Ob-Gyn in the hospital setting. Dr. Hindle also serves on the National Health Care Commission, Committee on Gynecologic Practice of the American College of Obstetricians and Gynecologists.

1957
A letter from Howard Minners gave news about his recent activities and also those of classmate, Robert Kaiser, who has received two national awards for his work in disease prevention and public health.

Dr. Kaiser, who is director of U.S.P.H.S. Centers for Disease Control’s Division of Parasitic Diseases, received the 1982 William Crawford Gorgas Medal which is presented annually by the Association of Military Surgeons for the United States for "distinguished work in preventive medicine" in honor of Major General Gorgas, whose work in preventive medicine made possible the construction of the Panama Canal.

An alumnus of the London School of Hygiene and Tropical Medicine from which he received a diploma in Tropical Medicine and Hygiene in 1963, Dr. Kaiser was awarded the 1982 Ademola Ademola Medal which is presented by the School’s Council to past and present students who have made the greatest contributions to the promotion of health in developing countries. The medal honors Dr. G.A. Ademola, a key figure in the development of health and welfare services in Nigeria.

Since 1964, Dr. Kaiser has been extensively involved in the Global Malaria Eradication Program, and particularly with malaria control in Central America and with health research in Egypt, the Caribbean, Central America, and Mexico.

About his own activities, Dr. Minners wrote that he had traveled in September to Manila where he was head of the United States delegation to the World Health Organization Western Pacific Regional Committee Meeting. Following the sessions in
Manila, he visited research organizations in Rangoon and Colombo, concluding his travels around the world with a short stop in Geneva with the World Health Organization.

1958
Gerard Burrow visited Yale in April to deliver The Philip K. Bondy Lecture, which honors the former chairman of the Department of Internal Medicine. Dr. Burrow is the Sir John and Lady Eaton Professor and chairman of the Department of Medicine at the University of Toronto. He spoke on thyroid disease in pregnancy.

1959
Gerald Fenichel spoke to the Yale Neurological Study Unit on September 28; his topic was "The Neurological Complications of Immunization." Dr. Fenichel is professor and chairman of the Department of Neurology at Vanderbilt University School of Medicine.

1960
Announcement was made last fall by the regional medical director of the Kaiser-Permanente Medical Care Program and president of Northwest Permanente, P.C., Physicians and Surgeons in Portland, Oregon, that Stuart Bowne had been appointed Kaiser Sunnyside medical director and vice president of operations. He is responisble for medical services of the Kaiser Sunnyside Medical Center and Kaiser-Permanente Medical Offices in southeast metropolitan Portland.

Dr. Bowne, physician in charge at Kaiser Foundation Hospital at El Cajon, California since 1979, previously held positions with the Southern California Permanente Medical Group at San Diego. In 1967, he was appointed as a general and vascular surgeon; in 1968, he became chief of surgery and in 1978, assistant to the associate medical director.

Northwest Permanente, P.C. Physicians and Surgeons is a group of 264 physicians affiliated with Kaiser-Permanente Medical Care Program providing health care services to approximately 250,000 prepaid group practice Health Plan members in Oregon's Portland, Vancouver and Salem areas.

1961
John Fenn was appointed chief of staff of Yale-New Haven Hospital, effective March 1. A life-long resident of the New Haven area, Dr. Fenn has been involved in many community activities and within the Hospital has served as associate chief of surgery, medical director of the operating rooms, president of the medical staff and in many other assignments.

Another book on family therapy has been published by John Pearce, Ethnicity and Family Therapy, 600 pp., edited by Monica McGoldrick, John Pearce and Joseph Giordano from the Guilford Press (New York City), came out last fall. This book, which should be very useful as a textbook, describes ways of doing therapy with 18 different USA ethnic groups. Dr. Pearce reports that he is now starting a new book on cross-cultural marriage.

1963
In July 1982 Craig Llewellyn became professor and chairman of the Department of Military Medicine andCommandant of Students at the Uniformed Services University of the Health Sciences in Bethesda, Maryland. During the previous year he was a student at the Industrial College of the Armed Forces where he wrote a prize-winning research study on strategic aeromedical evacuation.

This past November Colonel Llewellyn was installed as president of the International Health Society at the American Public Health Association meeting in Montreal.

1964
Remo Fabbri participated as a lecturer and member of a faculty of 17 at the annual workshop, "Application of Hypnosis in Therapy," of The New England Society of Clinical Hypnosis in Boston in April. Dr. Fabbri, a fellow of The American Society of Clinical Hypnosis and chairman of that Society’s education committee, is also a fellow of the Academy of Psychosomatic Medicine.

Dr. Fabbri, specializing in the use of hypnotic techniques in the treatment of psychosomatic and sexual disorders, practices in New Haven and is an associate psychiatrist at Yale-New Haven Hospital.

1965
Victor Burner, who has practiced in La Canada, California for over ten years, is the author of a book entitled "The Noblest Form," released by the Great Western Publishing Co., Glen- dale in 1981. The narrative, which closely follows the Biblical account, tells the story of David and Jonathan. Its form is operatic libretto so it may one day achieve musical expression.

Dr. Burner is also a devoted musician. He is a member of the American Guild of Organists and a trustee of the Southern California Conservatory of Music. He has played in Italy with the Rome Festival Orchestra, and in France with Les Jeunesses Musicales Francaises, and on tours with the Los Angeles Doctors Symphony Orchestra.

Ronald Karpick has been elected to fellowship in the American College of Physicians and was so honored at the College’s annual session in San Francisco in April. Dr. Karpick, who resides in Falls Church, Virginia, is on the staff of the Alexandria Hospital, Northern Virginia Doctors Hospital, Fairfax, Circle Terrace and Jefferson Memorial Hospitals.
1966
At the 1982 American Psychiatric Association meeting in Montreal, it was announced that Stanley Greenspan was selected to receive the 1982 Edward A. Strecker Award for outstanding research contributions to child psychiatry.

1968
Grace Jordison Boxer is now associate chief of staff for education at the Ann Arbor Veterans Administration Medical Center. In this position Dr. Boxer has responsibility to coordinate training for most of the medical center’s 950 employees and establish affiliation agreements with colleges and universities that bring as many as 1,000 trainees to the medical center annually in areas such as medicine, surgery, pharmacy and physical therapy. She also oversees support services such as medical photography and illustration, the medical center library, and the patient education program.

Before assuming her new position last year, Dr. Boxer served for three years as chief of the Hematology Section of the Indianapolis VA Medical Center and was from 1977 to 1982 assistant professor of medicine at the Indiana University School of Medicine.

She and her husband, Lawrence Boxer (HS ’68), have a six-year old son, David.

1969
Charles Dinarello has been promoted to physician in the experimental medicine division of the New England Medical Center Department of Medicine. He also is an associate professor of medicine at Tufts University School of Medicine. Dr. Dinarello came to NEMC and Tufts in 1977 from Bethesda, Maryland, where he was a senior investigator for the Laboratory of Clinical Investigation of the National Institute of Allergy and Infectious Diseases, National Institutes of Health.

John Kelly wrote in March that after two years of internal medicine at Yale and after having been a consultant in neurology at the Mayo Clinic, he is now an associate professor of neurology at Tufts Medical School and Tufts New England Medical Center in Boston where he is director of the Electromyography Laboratory.

1972
Announcement was made recently that Philip Cohen has been elected to fellowship in the American College of Physicians and he was so honored at the annual session of the College in San Francisco in April. Dr. Cohen, who specializes in rheumatology, has been a resident of Chapel Hill, North Carolina for three years and is on the faculty of the University of North Carolina School of Medicine.

Roy Kaplan, a resident of Leucadia, California, is specializing in rheumatology and is on the staff of the Mercy, Sharp Memorial, and University Hospitals in San Diego and the Arthritis Foundation, San Diego Chapter. He has been elected to fellowship in the American College of Physicians and was among the group to be so honored at the College’s annual session in San Francisco in April.

1973
David Adler has been appointed assistant chief of the Division of Adult Psychiatry in the Department of Psychiatry at the New England Medical Center in Boston. Dr. Adler, following residency at the Massachusetts Mental Health Center, joined the staff of the New England Medical Center in 1976.

Thomas Romano and James Sullivan have been elected to fellowship in the American College of Physicians. Dr. Romano, a specialist in rheumatology, is on the staff at Los Altos Hospital in Long Beach, California. Dr. Sullivan, who resides in Quaker Hill in Connecticut, is on the staff of the Lawrence and Memorial Hospitals in New London and is an assistant clinical professor of medicine at Yale.

1975
Sydney Spiesel is now engaged in the private practice of pediatrics and adolescent medicine at 19 Edwards Street in New Haven. He will continue to serve on the Yale faculty as assistant clinical professor of pediatrics.

Stephen Vlay, director of the University Hospital Coronary Care Unit at State University of New York at Stony Brook has been elected to fellowship in the American College of Cardiology.

1976
O’dell Owens is now at the University of Cincinnati Medical Center where he is assistant professor of obstetrics and gynecology and director of the Division of Reproductive Endocrinology and Infertility. Prior to this appointment, Dr. Owens had been working in this field at Harvard.

1978
John Ogland is now instructor and chief resident in the Department of Psychiatry at the Connecticut Mental Health Center at Yale.

HOUSE STAFF

1946
The Coalition of National Health Organizations has acknowledged John McGovern’s tireless efforts in the promotion of health and a better quality of life for the people of the United States by presenting him with its Distinguished Service Award which cites Dr. McGovern for his significant contributions to health education and medicine. In addition to currently holding eleven university faculty positions, eight of which are in Texas, Dr. McGovern remains director of the clinic that bears his name and which he organized. He is the chairman of the boards of the Texas Allergy Research Foundation and the John P. McGovern Foundation. A member of numerous honorary and professional societies in medicine, science and health education, Dr. McGovern continues to be an active consultant to the Board of Regents of the National Library of Medicine to which he received a Presidential appointment and which he chaired in 1973–74.

1968
Lawrence Boxer is director of Pediatric Hematology-Oncology at Mott Children’s Hospital in Ann Arbor and professor of pediatrics at the University of Michigan School of Medicine.
1975
Regarding Herman Kamenetz’ latest publication, “Dictionary of Rehabilitation Medicine”, the publisher’s (Springer Publishing Company, New York) catalog states: “This superb resource book offers in a single volume a look into the multidisciplinary world of medical rehabilitation in its broadest aspect . . . . It is a uniquely valuable reference source for teachers and students in medicine, physical, occupational, and other therapies, nursing, psychology, prosthetics, physical education, speech pathology and other fields close to rehabilitation medicine.”

Dr. Kamenetz is chief of rehabilitation medicine at the Veterans Administration Medical Center in Washington, D.C.

EPIDEMIOLOGY AND PUBLIC HEALTH

1951
In December, on the occasion of the 80th anniversary of The Pan American Health Organization, welcoming remarks were presented by the Organization’s director Hector Acuna. Dr. Acuna noted in a recent letter that he has held this position for two four-year terms and that following the end of his second term in January 1983, he would be serving for six months in an advisory capacity with the director-general of the World Health Organization, Dr. Halfdan Mahler.

After June 1983, he will be with the Area II Office of the Pan American Sanitary Bureau in Mexico City.

1967
A brief note from James Malloy states that he is now director of University of Illinois Hospital in Chicago.

1972
Raymond Sphar, M.D. assumed command in January, 1983, of the Naval Medical Research Institute (NMRI), Bethesda, Maryland. Now in its 41st year of conducting basic and applied biomedical research, the Institute has programs in casualty care, environmental stress, hyperbaric medicine, and infectious diseases. In addition to the main laboratory complex at Bethesda, NMRI operates a detachment for toxicology research at Dayton, Ohio, and a newly-established unit in Lima, Peru, for tropical diseases research. There are customarily several U.S. Navy officers from NMRI on detached assignment to the Yale Arbovirus Research Unit.

1977
A letter from John Zil states: “I have been promoted to associate professor of psychiatry and medicine at University of California, San Francisco effective July 1, 1982. I remain on as chief of psychiatry and neurology at the Veterans Administration Medical Center in Fresno (a UCSF teaching hospital), where I am continuing two research projects on sleep-deprivation and cholinergic-driven effects on REM parameters.”

IN MEMORIAM

Joseph Weiner, M. D. January 13, 1983 ex med ’20
Maurice F. O’Connell January 1, 1983 M. D. ’22
Joseph A. Johnston December 25, 1982 M. D. ’23
David Freeman December 25, 1982 M. D. ’24
Thomas Cottiero December 14, 1982 M. D. ’26
Hyman Cohen August 10, 1982 M. D. ’27
Marion H. Douglas April, 1982 M. P. H. ’27
Er-Chang Ping October 24, 1982 M. D. ’28
Alvin A. Schaye February 25, 1983 M. D. ’28
Yale D. Koskoff March 9, 1983 M. D. ’31
Robert Cruther January 31, 1983 M. D. ’38
Philip E. Nelbach January 31, 1983 M. P. H. ’38
Robert G. Ernst February 18, 1983 M. D. ’39

Rev. Sydney S. Byrne ex med ’40
Charles W. Cashman, Jr. M. D. ’41
William F. Hillier, Jr. May 25, 1982 M. D. ’43
Carleton J. Brown December 7, 1981 M. D. ’45
Nelson F. Evans (date unknown) M. P. H. ’49
Eunice R. Pellow (date unknown) M. P. H. ’53
Allan W. Ames (date unknown) M. D. ’60
David Paul Dunn December 17, 1982 M. D. ’60

Philip E. Nelbach
M. P. H. ’38

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### First-Year Postgraduate Appointments

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<th>Location</th>
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<th>Specialties</th>
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<td>University of Arizona Affiliated Programs, Tucson</td>
<td>Augusta Roth — Family Practice</td>
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<td><strong>California</strong></td>
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<td>Kaiser Foundation Hospital, Los Angeles</td>
<td>Mathew Clark — Family Practice</td>
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<td>Kaiser Foundation Hospital, Oakland</td>
<td>Julie Faiss — Medicine</td>
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<td>Lettermann Army Medical Center, San Francisco</td>
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<td>Los Angeles County — University of California Medical Center, Los Angeles</td>
<td>Miguel Martinez — Surgery, John Neal — Neurosurgery</td>
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<td>San Diego Naval Hospital, San Diego</td>
<td>Maria Schmidt — Surgery</td>
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<td>Stanford University Hospital, Stanford</td>
<td>Richard Cawthon — Psychiatry, Scott Lambert — Medicine</td>
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<td>University of California Affiliated Hospitals, San Diego</td>
<td>David Easter — Surgery, Elizabeth Nolan — Surgery</td>
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<td>University of California (Davis) Medical Center, Sacramento</td>
<td>Frederic Martin — Medicine</td>
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<td>University of California Hospitals, San Francisco</td>
<td>Stephen Cook — Medicine, Jessica Herzstein — Medicine, David Norton — Pediatrics, David Schwartz — Medicine, Yuen So — Medicine</td>
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<td>University of California Los Angeles Hospital and Clinics, Los Angeles</td>
<td>Patricia Warkus-Daaboul — Psychiatry, Bruce Yager — Pediatrics</td>
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<td>University of California Los Angeles Neuropsychiatric Institute</td>
<td>George Bartzokis — Psychiatry</td>
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<td>Toronto Western Hospital, Toronto</td>
<td>James Deutsch — Flexible</td>
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<td>Griffin Hospital, Derby</td>
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<td>Gabino Lomeli — Transitional</td>
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<td>Norwalk Hospital</td>
<td>Gerri Goodman — Medicine</td>
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<td>Yale-New Haven Medical Center</td>
<td>Ams Bodner — Medicine, Elena Cikowitiz — Medicine, Nancy Czarkowski — Pediatrics, Sean Dowling — Medicine, Dianne Edgar — Surgery, James Grober — Medicine, Robert Johnson — Obstetrics &amp; Gynecology, Marshal Mandelkern — Psychiatry, Lois Morton — Psychiatry, Nancy Terrell — Medicine, Michael Tom — Surgery, Eric Winer — Medicine, Tina Young — Pediatrics</td>
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<td>Walter Reed Army Medical Center, Washington</td>
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<td>Victor Perez — Psychiatry</td>
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<td>Johns Hopkins Hospital, Baltimore</td>
<td>Pamela Zeitlin — Pediatrics</td>
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<td>University of Maryland Hospital, Baltimore</td>
<td>Barbara Brandt — Family Practice</td>
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<td>Brian D’Angona — Surgery</td>
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<td>Tammy Harris — Obstetrics &amp; Gynecology</td>
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<td>David August — Medicine</td>
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<td>McLean Hospital, Mt. Auburn</td>
<td>Eric Nestler — Psychiatry</td>
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<td>New England Deaconess Hospital, Boston</td>
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<td>Judith Melin — Medicine</td>
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<td>Mayo Graduate School of Medicine, Rochester</td>
<td>April Chang — Medicine</td>
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<td>University of Minnesota Hospitals, Minneapolis</td>
<td>David Lindgren — Orthopedic Surgery</td>
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<td>Jerry Tobler — Diagnostic Radiology</td>
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<td>University of Medicine Dentistry of New Jersey</td>
<td>Laura Schafer — Psychiatry</td>
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New York
Bronx Municipal Hospital Center
Daniel Sabbeth — Psychiatry
Lenox Hill Hospital, New York City
Brian Aremare — Surgery
Montefiore Hospital, New York City
Anil DeSilva — Surgery
Mount Sinai Hospital, New York City
Alan Reznik — Surgery
New York University Medical Center, New York City
Edouard Martin — Medicine
Michael Silverberg — Medicine
Presbyterian Hospital, New York City
George Daniel — Obstetrics & Gynecology
Jose Guillen — Surgery
Ana Lamas — Medicine
St. Luke’s Hospital, New York City
Janis Cutler — Flexible
St. Luke’s-Roosevelt Hospital Center, New York City
Randle Ware — Medicine
The New York Hospital, New York City
David Helfgott — Medicine
Robert Kenet — Medicine
Moshe Rubin — Medicine
Leonard Saltz — Medicine
North Carolina
North Carolina Memorial Hospital, Chapel Hill
Philip Spiro — Surgery
Ohio
Case Western Reserve University Hospital, Cleveland
Patricia Kellner — Family Practice
Cincinnati General Hospital
James Glower — Emergency Medicine
Oregon
Providence Hospital, Portland
Mary Johnson — Medicine
University Hospital, Portland
Barbara Keene — Pediatrics
David Lichter — Family Practice
Pennsylvania
Graduate Hospital, Philadelphia
Alan Bloom — Medicine
Hospital of the University of Pennsylvania, Philadelphia
Mark Boytim — Orthopedic Surgery
Thomas Brockmeyer — Orthopedic Surgery
Michael Choti — Surgery
James Lucarini — Surgery
Temple University Hospitals, Philadelphia
Robert Kotloff — Medicine
Abby Van Voorhees — Medicine
Henry Weiner — Medicine
Vermont
Medical Center Hospital of Vermont, Burlington
Colin Lee — Medicine
Washington
University of Washington Affiliated Hospitals, Seattle
Emily Altman — Medicine
Nancy Kraemer — Pediatrics
Dwight Stapleton — Medicine
Wisconsin
University of Wisconsin Hospital and Clinics, Madison
Brent Tetri — Medicine
ATTENTION!

ALUMNI/AE IN MEDICINE AND PUBLIC HEALTH

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Here and About 12
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Cover: Resemblance to the tunnel to Wonderland is purely coincidental. The new pedestrian walkway provides protected access between the new parking garage and the hospital. For more new views of the Yale-New Haven Medical Center, see pages 9 - 11 (Photo by M. Noyes)

1984 ALUMNI WEEKEND
JUNE 7, 8 & 9
PLAN NOW TO ATTEND!
I would like to welcome all of the smiling parents, grandparents, relatives, and friends who have come to New Haven for this happy occasion. You have every right to be proud of these men and women graduates. I can attest to that, for many have come to be my very close friends during the past four years and I am in awe of their collective and individual abilities.

In a few short weeks, most of you will find yourselves as interns, scattered across the land. It will be a memorable year. I'm certain that many of you have looked at graduation as the light at the end of the tunnel, but I caution you to remember that the light at the end of the tunnel could well be a train coming the other way.

Although that train could represent the rigors of internship, it might also be symbolic of the public's growing unhappiness with us as a medical profession. Despite remarkable advances in our ability to diagnose and treat human disease, something is wrong with our image. How can things be wrong, you ask, when our physicians are more able than ever? when people are living longer than ever? when our hospitals are bulging with sophisticated equipment? and when physicians are plentiful and moving into every nook and cranny of the country? How can the public possibly be disgruntled with all of that?

Although the answers to these questions are complex, there is no doubt that the traditional doctor/patient relationship has become tarnished. Today, I want to examine five possible reasons relating to some of the public's unhappiness. These five factors are important to consider here because they need attention and you soon will be in positions to do something about them.

The first important factor contributing to the public's dissatisfaction with American medicine has been our failure to provide a strong primary care system. In the past twenty-five years, we have encouraged our brightest doctors to become subspecialists and they are now tripping over one another, competing for access to the same pool of patients. Specialists now account for fifty to sixty percent of all physicians. Any system of health care that encourages patients to see several different specialists, just for health maintenance, is bound to be expensive and inefficient. Furthermore, it does not guarantee good care. It is certain to annoy patients who don't know which specialist to call when they simply feel sick all over and can't identify a specific organ that is malfunctioning. Patients followed by several doctors may not only receive several bills, but conflicting messages about their diagnoses and therapy.

There must be a primary physician in charge, and, in my opinion, it is appropriate for that person to be a highly trained, well paid, generalist who has the skills to handle a great many of the medical problems now referred to subspecialists. This primary physician must be able to practice in a stimulating group environment, and be willing to tackle any complaint. The practice must be organized in such a way as to provide opportunities to get away from it from time to time, for continuing education, for a meaningful private life. The primary physician should be the backbone of our medical care system. Since it requires the most comprehensive knowledge and sensitivity, this role should be reserved for our most exceptional doctors and we must find ways to lure some of them away from the attractions of subspecialty practice. It is important to accept the notion that this primary physician is not just for trivial illness as the public has come to perceive. I know that it is possible to find outstanding generalists who can deal competently with most medical conditions. My current chief resident is one, and if he could just be cloned, I believe that we could do away with half of the medical subspecialists in the country. I would trust him to care for almost any non-surgical illness that I could have. His knowledge and clinical abilities are remarkable. He might need a specialist from time to time as a consultant, but certainly not to provide continuing care. One partial answer to the
problem has been for subspecialists also to serve as primary physicians, but the extent and effectiveness of this practice may have been overstated in the recent literature. I would prefer to see committed generalists who have been trained for just that kind of practice.

The real solution to this problem of encouraging generalists to enter practice will probably have to be economic. Unfortunately, invasive maneuvers done to patients continue to be reimbursed at a much higher rate than the good old-fashioned use of the brain alone. It is time to restore some balance to the system. Complex medical intensive care management should at least be the monetary equivalent of a simple surgical procedure. When insurance carriers reduce their support of expensive (and possibly unnecessary) procedures, and increase their support of general medical care, our best doctors may be more inclined to consider general medicine, general pediatrics or general psychiatry.

In addition, medical educators must restore prestige to the general practice of medicine. Academia continues to foster the glory of subspecialization because most of the faculty are subspecialists. We must find ways to reverse the trend and retain outstanding general physicians on medical faculties, as well as to encourage our most capable young clinicians to consider general medicine as a way of life. I am hopeful that some of you will follow that course.

A second reason that the public is displeased with us is related to the rapid pace of modern medicine and, as a result, poor communication with doctors. Doctors, unfortunately, seem to be too busy to spend much time with patients as medicine has become more complicated. The hospital, too, has become a bustling place.

Being a patient, it turns out, is an intensely personal affair, charged with worry and prone to misunderstandings. Every physician as well as everyone who works in a hospital must never forget that. We tend to become so accustomed to the hospital environment and to illness, that it is easy to forget how significant every little thing becomes for a patient. There must be a quiet respect for the special needs of the sick and ample time reserved by us to sit and talk with our patients.

A third significant factor troubling the public is the enormous cost of medical care. They cannot understand why the total annual cost has finally reached ten percent of our gross national product. Is there any limit to the continued rise? The public grumbles that physician's fees are too high even though they represent only twenty percent of the total cost of medical care; that insurance premiums are outrageous; that the costs of medicine, laboratory tests and procedures are shamefully inflated; and that the cost of a day in the hospital, to say nothing of the intensive care unit, is beyond that which any ordinary person can afford. I urge you to look at the bills of some of your hospitalized patients. It was shocking to me to see the cost of tests which I had ordered in sort of a casual way. A single day at Yale-New Haven Hospital, not including the physician's fee, diagnostic tests, or drugs, currently costs $285.00 for a private room. If you are unfortunate enough to be in the intensive care unit, it will cost you about $700 dollars a day, double that of only two years ago. I bought my first car for less than that. A chest x-ray costs $41; a simple blood count, $5.50 and $8.00 more if you want a differential count. Electrolytes cost $25, enough to pay for a sumptuous dinner. A Swan-Ganz catheter costs $91 but a staggering $721 hospital charge for its insertion in the procedure room, on top of a $350 professional fee, for a total cost of over $1000 for this commonly used procedure. And so it goes.

It is important to realize that the hospital is not out to gouge the public. It is a non-profit organization. It is simply trying to stay solvent; to pay for its buildings, its work force, its equipment, and all the other things that we order. It is an enormously expensive business and we are, in part, responsible for the generation of much of it.

What, if anything, can we do to stem the tide? The public wants sophisticated comprehensive care and is apparently willing to pay a large amount of money for it, but the increases are rapidly reaching a point where limits will be necessary. You can help. You will have to help.

Consider the very real possibility that everything that we do to patients may not be absolutely necessary for quality care. Could home care be strengthened? Does every inpatient need a fancy hospital? Could a hotel or motel attached to a hospital substitute for a hospital bed in some cases? Do we, as physicians, think carefully about the cost effectiveness of tests ordered; of procedures done; and of therapies given? Are we aware of the relative cost of drugs and that one drug may be much cheaper than another with just about the same spectrum of action? For the most part, physicians are not well acquainted with what many of these things cost. We haven't been used to thinking in these terms, but it will be essential to do so in the days ahead. I believe that it would be possible for us to reduce the current costs of medical care ten or twenty percent without compromising the scope or quality of that care, simply by education and reminders to physicians about the costs of what they are generating.

In addition, physician's fees must be more realistic and balanced. Insurance carriers must stop rewarding high cost procedures and provide more financial incentives to curtail tests and to encourage comprehensive primary care. We must, as a group, support the inevitable changes in the current reimbursement program. We should, at the very least, acquaint ourselves with the details of our reimbursement systems, including medicare, medicaid, and the new system coming in October, known as DRG, or diagnosis related groups, whereby a certain condition regardless of the actual cost. It is a subject too important to leave for others.

A fourth reason for the public's complaint with us has been our failure to accept death as a natural part of living. We still look at death as a failure of medical science. Sometimes it is just that, but our zeal to support life at all cost has not always been well received. The
majority of our intensive care beds are occupied by patients whose life expectancy is only a few months. Respirators and other sophisticated monitoring equipment which do save many lives, also allow us to prolong the life of many with a terminal illness. We are all uneasy about the problem because it has always been difficult for physicians to discuss the option of no treatment with patients. For terminally ill patients, the Hospice movement represents a way to face death in a positive rather than a negative way. Hospice is a remarkable concept and its powerful message warns us not to neglect the dying. On rounds, do not pass by the room of a dying patient without stopping. A brief visit, soft words, a tender touch, and reassurance about pain control will bring comfort and peace to one's final hours.

Lastly, the public is unhappy because they have unrealistic expectations about what medical science can do for them. The media is partly to blame with its emphasis on spectacular medical experiments covered widely in the press, such as heart and liver transplants. Is it any wonder that the public tends to look at their bodies like an automobile? Bring it in for new parts and when it doesn't work, blame the mechanic. We have not done a good job in educating the public to the limitations of our therapies. They flock to emergency rooms expecting quick cures for the common cold. Americans have been gradually abandoning personal responsibility for their own health and insidiously transferring that responsibility to us. We must provide vigorous leadership in informing the public that preventive medicine is still the best treatment. Alterations in personal behavior could profoundly reduce a number of major disease processes. We must become politically active and lobby on behalf of those causes which play such an adverse role on the health of this nation and world.

Cigarette smoking kills tens of thousands of patients each year. As physicians, we have been a weak and ineffectual force in combating tobacco lobbies to reduce this terrible health problem. The complications of alcohol continue to fill our hospital wards. We cannot sit back passively and watch the slaughter. We must help society find better ways to control this awful problem. Environmental pollution threatens us all; and worse, the unbridled proliferation of nuclear weapons poses a health threat with which we simply cannot cope. We must also decry the fact that the projected increase in the defense budget is more than the entire NIH budget for medical research.

Physicians must be heard on these issues. We have a responsibility to our collective patients to speak out, to educate, and to become a political action group on behalf of health. I am counting on you to carry the torch.
At a recent symposium for new clinical clerks, Dr. Thomas Duffy noted a most striking aspect of the third year is "the extraordinary advancement that people make between June of one year and June of the following. It is very important at the present time, . . . when you feel you are being tossed into a frenzy and really don't know which way to turn, to simply know where you are in relation to what it is that's being asked of you."

Medical education and medical providers have been under increasing attack from the public because of perceived deficits in the training of physicians and in providing medical care in a humane fashion. Criticism of medical curriculum and medical practice have come from The New York Times, The New England Journal of Medicine, The American Medical Student Association, and The Association of American Medical Colleges, to name a few. As students undergoing the training in question, we felt that, perhaps better than the faculty, we could understand some of the processes and experiences in the training of physicians which lead to this widespread criticism. Certainly, the internship year is a formative one for the physician, but as important is the third year of medical school when students encounter patients, patients' families, doctors, nurses, and their fellow students in the environment in which they will function for the rest of their careers. No amount of attention in the first and second years of medical school can prepare students for the issues encountered in the third year. They can only be addressed and understood in the environment in which they are relevant.

Many changes occur in the behavior and thought processes of physicians as they are trained. We are not so cynical as to think that all of these changes are bad, or so naive as to think that those that are bad are entirely preventable. We do believe, however, that encouraging students to become aware of their environment and their role in that environment, to be more aware of the consequences of their actions on patients and on their own lives, would increase the likelihood of training a more humane physician with less damaging consequences throughout their careers to their patients, society, and themselves. Many students begin their third year with the idea of developing an educational program for third year clinical clerks that would supplement the traditional clerkship schedule. The idea grew out of the belief that this formative period was often unnecessarily troubling to students because of a lack of orientation to their new environment, and that as a result they were often unaware of the consequences of their actions on others and themselves. Last year, Patty Kellner (83) organized a one-day symposium entitled, "Surviving the Third Year: The Well-Being of the Patient and the Medical Student." Largely because of the success of that symposium, we organized and recently held the first of two planned symposia for third year students. The symposium held during the second week of the clerkship period in July was intended to provide a practical orientation to the experiences the students were beginning. It was organized by fourth and fifth year students through the office of Dr. Alan Mermann, Chaplain of the School of Medicine.

Speakers from throughout the medical center gave short talks on subjects of interest to the new clinical clerks. Dr. Robert Lang and Dr. Alan Kliger, associate professors of medicine noted that, "the academic background we all get preparing us for medicine leaves a huge gap when you start your third year." They described their seminar for third year students in the medicine clerkship, "Issues in Medicine," which tries "to work with students so they can discover from their experience, what it takes to feel good, to do it well, and to fit in the right place . . . No one pays very close attention to what we are feeling when we are with patients." The importance of trying to understand these feelings during the third year was underscored by noting that the "patterns that you set for yourself this year are likely the patterns you are going to use for the rest of your life."

Angela Holder, medicolegal counsel for the School and Hospital discussed common legal questions raised by students. She assured students that her office was eager to hear from students early about potential legal problems but observed that "the majority of students who come to her with what they think is a problem did not understand the situation . . . Part of your education may be finding out that what appears to be to an outsider like a certain clear and compelling screw-up . . . is not." She reminded students that "patients do not waive their right of privacy because they are in a teaching hospital . . . but that there are very few patients who don't want to become involved with medical students . . . They think you are kind, considerate and spend much more time

**Laird D. Madison, a M.D. / Ph.D. Student, was largely responsible for the organization of the 1983 Clinical Clerkship Orientation Symposium. This article is based, in part, on a report he gave to the Medical School Council.**
Dr. James Nocks, associate clinical professor of psychiatry, spoke about dealing with the alcoholic patient and noted that “somewhere along the line in medical school, a fair amount of negative learning takes place about alcoholism.” Following his talk, Dr. Leonard Grauer, associate clinical professor of medicine, encouraged medical students to engage with the private attending early in the care of private patients.

Dr. Duffy, professor of medicine, noted that the admission of medical students to the ward for learning “is not something that has gone on for a very long period of time.” He advised the students, “you must become the master of your physical examination . . . The problem that exists is that you will run away from what is the excitement of the initial encounter to be looking at your scans, to be looking at whatever it is that takes you down the corridor from where the most information can be generated . . . the patient.”

“I think that (as students) you bring to you what amounts to a certain burden in the whole process of the doctor-patient relationship. The burden is a certain laid-back, mellow quality where you may substitute friendship for what is the absolute need for detached concern—where you are concerned about another human being, but not to the point where you are so anxious that you’re making the wrong decisions,” Dr. Duffy told the students. “And, friendship oftentimes gets in the way of the necessary detachment which doesn’t move all the way to aloofness. You have to learn how to walk a very tightrope, in terms of the tension, where you can use your professional knowledge to help another human being, but not be overwhelmed by the suffering that it allows and demands your access to.”

He cautioned the students to be aware of their role and to respect the difference between their role and that of the interns and residents. The urge of the student to be in charge overlooks “the greatest luxury that you have as medical students—to have access to an intensity of medical problems without having to go home at night and worry whether or not you helped somebody or hastened somebody’s death.”

A very important element of the day consisted of small discussion groups of third year students led by fourth year students. In these sessions they discussed the real “work” of clinical clerks: work-ups, write-ups, and oral presentations. They discussed strategies for succeeding in various clerkships, common problems, and ways of trying to avoid them. Most importantly, they provided reassurance to each other that not only would they “survive” the third year, but that they could expect to triumph in their new skills and responsibilities by the time the year was through.

The participation of most of the third-year class, many interested fourth-year students, as well as a number of concerned faculty, demonstrate that there is a body of knowledge and skills in the clinical years that spans all clinical disciplines that can and should be addressed independent of ward and clinical experience.

The current curriculum of the third and fourth years of medical school does not address these broader issues affecting our delivery of medical care. Since this period is one in which students first begin to form their clinical “styles” and attitudes it is important to reconsider what is to be accomplished in the second half of medical school. In an ideal situation the clinical attendings would address these broader issues as they become relevant in their dealings with students, thereby lending the support and wisdom of their broad clinical experience to those just entering the profession. The reality of the situation, however, is that the attendings are busy with many other activities, and clinical clerks end up learning and patterning their behavior after the interns, people only two years more advanced in their training themselves. The interns are not necessarily concerned with their influence as teachers, and many aren’t displaying the best attitudes and behaviors because of their own stressful situation.

Our activities in organizing symposia for third year students is a modest beginning in an effort to enrich the experience of the clerkship period. It is hoped that with the support of the faculty this effort could be continued and enlarged in the future.

Dr. Mermann led members of the Class of 1983 in the taking of the Hippocratic Oath at Commencement.
SURVIVAL: IS THAT OUR REAL GOAL?

By Alan C. Mermann, M.D.

"In the final analysis, to succeed is to survive relatively unscathed." This statement from a "survival manual" written recently for medical students beginning clinical training bothers me. I am quick to grant that there is a measure of humor and exaggerated self-pity in the use of the word "survival" in reference to the rigorous life of the medical student today. But we are enjoined to take language seriously. Even in such diverse genres as humor, essays, innuendo, faux pas and prayer, we do say what we mean. So, when the second year class bequeaths a Survival Kit to the entering class and the fourth year students are easily recruited for a seminar for third year students designed to help them survive "going on the wards", I think we should pay attention.

Medicine is evolving rapidly. The remarkable application of high technology to laboratory methods, surgical and investigative procedures and life-saving apparatus has so altered hospital practice as to make it awesome, if not incomprehensible, to older physicians. The exponential growth of scientific knowledge has made "keeping up" with medicine-in-general impossible for the office practitioner, and has pressed the physician and surgeon in an academic setting further into specialization to maintain leadership, pursue research, and advance scholarship.

These scientific and technologic advances have produced some unexpected results. The rise in patient expectations for cure of illness and repair of injury is paralleled by an impressive increase in malpractice suits. Our capacity to maintain biologic existence by mechanical means, to change species by genetic engineering, to alter behavior by drugs, and to study and treat the human fetus has created a new discipline—biomedical ethics—which attempts to clarify some of the dilemmas we have produced and assist in the search for answers to confounding questions never anticipated.

The most serious questions of all for medicine are raised by the necessity to allocate scarce resources. The social costs of developing an artificial heart, of dialysis of end-stage renal disease in the elderly patient, of organ transplantation, and of exquisitely designed and executed experiments in immunology are real and painfully apparent. A stroll—or perhaps safer, a drive—through the neighborhoods of most university medical centers will demonstrate, in a graphic way, the needs of our people. The relationship of our wealthy universities to the desperate, the poor, and the illiterate persons who live, both literally and figuratively, in their shadows, needs immediate definition and explanation.

It is against this background of an uneasy paradox—incredible scientific progress and rampant social decay—that the concerns of the medical student for survival must be examined. There are mixed messages being transmitted to the students and to the consumers of health services. On the one hand the universities, no less than the high-tech corporations, are in a race to exploit new methods for uncovering Nature's long-held secrets of DNA replication, leukocyte function or hormone production. Toward these ends, impressive funding is committed. On the other hand, students come to medical school, for the most part, to learn to become physicians responsible for the medical and psychological care of their fellow human beings. The teaching of the skills of interaction with patients, colleagues, administrators, public health officials and lawyers is left, pretty much, to observing busy house officers and attending physicians. The role of the doctor in issues of allocation, public policy toward the poor and the goals of research is rarely discussed.

The product of these decisions in the education of the student is the explosion of information in basic science taught in the first two years of medical school. Many students are hard pressed by the avalanche of facts which they are expected to process without any clues as to what is important for them in preparation for the clinical years. Little help is forthcoming from those teachers who have devoted their professional lives to research in the "pure" sciences. The intense competitiveness which began in the undergraduate years continues, even in medical schools which downplay examinations and grading. Perhaps the absence of formal examinations and non-grading creates more anxiety and confusion than we might like to believe.

The most perplexing issues revolve around the impact of the role of the doctor on the personal life of the student. The model for medical students—the physician-teacher in medical school and hospital, and the practitioner in the community—again sends mixed messages to the student. The place of the physician in our culture has been one of prestige, power and wealth. Despite many current criticisms of the profession and ambivalent feelings toward them, physicians still maintain positions of respect and prominence in society. This elevated status seems often in conflict with professed altruism of the medical profession. The effects of this conflict have been carefully outlined and discussed recently in an article in The New England Journal of Medicine. The increased incidences of suicide, drug and alcohol abuse and marital problems among physicians are disconcerting signs of personal unhappiness and lack of fulfillment in a profession held in high esteem. Techniques for surviving medical school may not function well over an

Dr. Mermann, clinical professor of pediatrics and chaplain of the School of Medicine, has practiced pediatrics in the New Haven area for twenty-five years.
extended period of time of stress.

The implication of survival is that the present is a difficult or painful period to be gotten through in anticipation of better times; that the immediate is neither desirable nor rewarding. One of the reasons the clinical years are something to be survived is that many students and house staff have yet to develop an inner life capable of incorporating those painful and difficult parts of training which demand so much of us physically, emotionally, and intellectually. Conflict with other professionals on the health care team; confrontation with pain, suffering and death; fatigue; a growing understanding of the devastating effects of illness; and an awareness of the futility of much of medical, surgical, and psychiatric practice, all combine to place serious stresses on the young student and house officer.

When we look to the goals for which we are willing to survive those student years, we face again the physician: wealthy, prestigious, powerful in community or university—and often desperate and unhappy. Success may be a mirage, an illusion which fades as we approach its realization. Success becomes failure because the goal is not worthy of our best endeavors: in fact, did not even engage our selves.

It is that engagement of the self in the care of the patient which can convert a survivor into a committed, even joyful, physician. One wonders what witticism would be forthcoming from the Oslers and Cushings of Medicine if “survival” was touted as a mark of the successful doctor. Studies have demonstrated that physicians spend less and less time visiting patients as they become sicker with terminal illnesses. The more difficult the patient, the more obscure or untreatable the disease, the less personal is the care provided by the doctor. It has been said that physicians visit dying patients less because “death is seen as failure — as the enemy.” I think that is a romantic excuse for an inability of physicians to face, accept, and deal with the fact of death. So many of us are bothered, not by the fact that the patient died because we could do no more, but rather because death is a part of life which few of us handle well. This is true of pain, loneliness, anxiety, and telling the truth to others. The difficulties lie with the physician, not with the patient. Denial and avoidance are strange but frequent ways of dealing with reality.

It has been noted that terminally ill persons are fearful, not of death, but of abandonment as they die. At the very moments in our lives when we need companionship, compassion and close contact with those we know and trust — when we are critically ill or dying — many physicians absent themselves.

I think that inhumane aspects of medical care result from the lack of careful and deliberate instruction during medical training which builds the resources for coping with trials which lie ahead. We need to learn, not only to withstand the devastating crises in medical practice, but to incorporate those experiences into and ever-deepening and satisfying psychological life. One of the greatest gifts which life has for us is the opportunity to become intimately involved in the lives of others. When the physician is free enough to acknowledge limitations usually all too apparent to the patient, then the rich and powerful experience of accompanying other human beings on a journey can be undertaken. It is willingness to open our hearts and minds to the pain and suffering of others that deepens us and allows more and more insight into our own needs and feelings, strengthening us and empowering us to do even more. Walking the extra mile can be an exercise in self-fulfillment and enlightenment. Reaching out can provide a positive and a hopeful posture for living. I have found the hoary dictum, “First, do no harm,” to be a depressing and negative foundation for life, both as a physician and as a person.

Many of us with advanced degrees in the sciences and the humanities have a grade-school level understanding of values, meanings and relationships between persons. If we can teach the latest developments in nuclear magnetic resonance, we can also teach ancient skills in seeking self-knowledge, recognition of the inter-relatedness of all life, and the transient values of treasures kept where “moth and rust doth corrupt.”

Physicians devote considerable time and energy to persons who are frightened and exposed to mortal danger. The attitudes we display toward our patients — the way patients see us — are accepted by students in the health professions as a template for their behavior. Shal-lowness of spirit, unexamined values, inability to identify with the feelings of the patient, and an exaggerated idea of the importance of the doctor — all these teach that only limited success is possible for those who survive the clinical years.

If medical students now think of clinical training and education as a time calling for survival, it is an attitude we have taught them. Practitioners, professors and research scientists — all need to search the depths of their personal and professional lives, examine their belief systems and show forth, in a courageous and compassionate fashion, what it means to care for other persons.

It is a temptation to reduce problems to the least common denominator, and this is often spoken of as oversimplification of complex problems. But we do have it on good authority that simplicity and deliberate search for the essentials of living are necessary. Survival is not enough. If we are to avoid despair we must take the risks implied in involving our lives with those of our colleagues, our students and our patients. To live, not having loved, is desperation. To die, not having lived, is the ultimate tragedy.

Footnotes
see also, Survival Manual: A Guide to the Classical Years, AMSA, 1983
The major construction and renovation projects at the Medical Center are, for the most part, completed. For more than two years, great craters and mounds of earth, attended by gigantic machines resembling prehistoric monsters, created near havoc in the area. (Yale Medicine, Fall 1979) From all of this has arisen a new parking garage, six levels high and two blocks long; a new hospital building to replace the aged and outdated New Haven Unit; and enlarged and improved facilities for therapeutic radiology research and patient care. And, three bridges have been added to the streetscape—two to facilitate interaction between basic scientists and physicians at the bedside; one to protect users of the garage from traffic and the weather. The venerable Hope Building has been given a new lease on life (Yale Medicine, Winter 1982), and projects are underway to renovate still others of its vintage. All in all, the views here and about have changed considerably.
A park has been created at the intersection of Cedar Street and Davenport Avenue. Across Davenport Avenue, the new hospital building is connected with the Memorial Unit.

The 250-foot covered walkway between the parking garage and the main entrance to the hospital is intended to provide safety and security for the faculty, staff, students and visitors who park there. Open twenty-four hours a day, the garage with space for 2400 cars, greatly alleviates dire parking conditions in the area. York Street passes under the garage.
Entrance to the new emergency room is on Davenport Avenue, almost at the corner of Howard Avenue.

Renovations to the Memorial Unit include a delightful outdoor dining area. In the background—the new parking garage.
President A. Bartlett Giamatti has announced the formation of a new Section of Molecular Neurobiology, and the appointment of Dr. Charles F. Stevens as the chairman, both for a term of five years, effective July 1. "I am confident the future of neuroscience at Yale will be strengthened by the establishment of this new Section," President Giamatti said.

Dr. Stevens, professor of physiology at Yale since 1975, is well known for his research on the molecular basis for nervous system function, and in particular, for his studies on the role of proteins in transmission of information over nerves and from one nerve cell to another in the brain. "During the past five years, there has been a very rapid and striking development of the molecular approach to practically all areas of medical science, including the study of the human brain," he said.

The new Section of Molecular Neurobiology will bring together six scientists of various disciplines, whose primary appointments will be in the Section, and who will interact with scientists from other departments in the University to apply molecular approaches to traditional problems in neurobiology. In addition, Dr. Stevens will assume responsibility for organizing a graduate program in the neurosciences, as well as continue his teaching of medical students.

Elected to the National Academy of Sciences in 1982, Dr. Stevens is a graduate of Harvard College, and received his M.D. degree from Yale in 1960, and a Ph.D. degree from Rockefeller University in 1964. Prior to his appointment at Yale in 1975, he had been professor of physiology and biophysics at the University of Washington School of Medicine in Seattle, where he had been a member of the faculty since 1963.

During the academic year 1969-70, Dr. Stevens was guest lecturer at Lorentz Institute for Theoretical Physics, Leiden University, The Netherlands. In 1979, Columbia University College of Physicians and Surgeons presented him the W. Alden Spencer Award for outstanding contribution to neuroscience, and in 1981, he was the Grass Lecturer for the Society of Neuroscience.

The National Institutes of Health have awarded more than $1.5 million to Yale University to establish one of three core laboratories and a clinical unit for collaborative clinical trials of a new treatment by thrombolysis of acute heart attack. Dr. Barry Zaret, professor of medicine and diagnostic radiology, is director of the laboratory, and Dr. Charles K. Francis, associate professor of medicine, is principal investigator of the clinical unit of Yale's portion of the study, which involves radioisotope aspects of thrombolysis in myocardial infarction (TIMI).

"The concept of thrombolysis has been an exciting major step in cardiology," according to Dr. Zaret. "The NIH study seeks to evaluate its effectiveness in preventing morbidity and mortality of heart attacks."

Studies based on initial observations in Germany have shown that not only are heart attacks caused by a blood clot formed in the area of one of the vessels supplying blood to the heart, but also that the clot can be dissolved by aggressive therapy involving infusion of an anticoagulant either through a catheter at the sight of the clot, or intravenously. If thrombolysis is administered in the early stages, blood flow is returned to the affected area, the heart attack may be aborted, and significant heart muscle damage may be prevented.

The NIH sponsored TIMI study will address two major questions. Is thrombolysis as beneficial as preliminary studies indicate? Which method of thrombolysis-by catheter or by infusion-is the safest and most efficient?

Approximately 1200 heart attack patients will be studied during the three-year investigation by major medical centers in the United States. Data generated from patients seen in the 12 clinical centers designated by the NIH will be analyzed and processed in the core laboratories at Yale, Maryland Medical Research Institute, and the University of Washington.

The Yale portion of the study will assess the efficacy of intravenous injection of anticoagulants as opposed to lysis through a catheter. They will measure the overall benefits of throm-
bolysis using radioisotopic techniques perfected by Dr. Zaret and his colleagues, to measure heart function.

In addition to Drs. Zaret and Francis, participants in the Yale portion of the study will include Dr. Lawrence S. Cohen, Ebenezer K. Hunt Professor of Medicine, Dr. William P. Batsford, associate professor of medicine, and Dr. Harvey J. Berger, associate professor of diagnostic radiology and medicine.

MYSTERY OF LYME DISEASE
A STEP CLOSER TO BEING SOLVED

Scientists at the School of Medicine have isolated for the first time a newly recognized spirochete from the blood, skin or cerebrospinal fluid of patients with Lyme disease. "The recovery of this organism from patients provides important evidence that the *I. dammini* spirochete is the causative agent of Lyme disease," according to Dr. Allen C. Steere, principal investigator of the research.

Previously the spirochete had been isolated only from *Ixodes dammini*, the tick identified as the probable transmitter of the disease. The new finding has implications for better diagnosis and treatment of the illness, and may help in the understanding of some other immune-mediated diseases such as rheumatoid arthritis.

Lyme disease, first recognized in 1975 by Yale medical scientists including Dr. Steere and Dr. Stephen E. Malawista, professor of medicine and head of the Section of Rheumatology, has affected hundreds of people along the Atlantic coast and in some mid-and far-western states. It typically begins in summer with a unique skin lesion, erythema chronicum migrans (ECM), which sometimes expands to a diameter of five inches or more, and may be accompanied by flu-like symptoms. Weeks to months later, some patients develop neurologic or heart symptoms, and still later, may develop intermittent attacks of arthritis, which may become chronic.

The later stages of Lyme disease often mimic several serious immune-mediated disorders including juvenile rheumatoid arthritis, rheumatoid arthritis, rheumatic fever, the Guillain-Barré syndrome and multiple sclerosis. The fact that the Yale scientists recovered the *I. dammini* spirochete not only from the skin and blood of patients, but also from the cerebrospinal fluid of those with neurologic symptoms ten weeks after the onset of the illness, suggests that the organism may first invade the skin or blood via the tick bite, and eventually migrate to the nervous system. The course of the organism thereafter is still unclear.

Dr. Steere and his colleagues are continuing their research to determine whether the spirochete is present during the late, arthritis manifestations of the disease, and if so, where it is located and what role it plays. "The question of a persistent infectious agent being necessary for continued disease activity, as opposed to triggering by such an agent, followed by auto-immunity, is of central importance in a number of immune-mediated diseases," they reported. The first clue that Lyme disease was caused by an infectious agent was the fact that several children with typical symptoms lived in the same neighborhood in Lyme, Connecticut. The rural setting of the area, plus identification of ECM as a distinguishing characteristic of the illness, suggested that it might be transmitted by an arthropod. Subsequent investigation by the Yale team provided strong evidence that a recently identified tick, *Ixodes dammini*, was the victor.

In 1979, Dr. Steere and his colleagues found that penicillin or tetracycline given early in the illness, shortens the duration of ECM and can sometimes prevent more serious symptoms. This suggested that the causative agent was a penicillin-sensitive bacterium such as a spirochete. In 1982, a previously unrecognized spirochete was isolated by scientists at the Rocky Mountain Laboratory in Hamilton, Montana, from an *Ixodes dammini* tick collected on Shelter Island, New York, where a number of cases of Lyme disease have been reported.
The University's 282nd Commencement was held on the Old Campus, between rain showers, on May 23rd. In contrast to the previous few years, when anti-war and social protests were evident, this year's commencement was marked by a note of gentle humor amidst the traditional pomp and circumstance. Forestry graduates decorated their mortar boards with leaves, and Divinity School graduates stuck pipe cleaner halos on theirs, while a small cast from the Drama School wore Groucho Marx masks. School of Medicine graduates remained relatively staid, with only an occasional happy-faced balloon rising from their ranks as they marched to their places beneath the elms.

In addition to 1,189 bachelor's degrees awarded to graduating seniors, Yale presented 1,824 graduate and professional degrees, including 99 M.D. degrees, and 74 M.P.H. degrees. Professor Dame Sheila Sherlock, who had been a guest lecturer at the School of Medicine a few days before, was one of nine distinguished men and women of the arts and science to receive an honorary degree. Chairman and professor of medicine at the University of London, she is an internationally renowned scientist, clinician, author and editor.

Following the ceremony on the Old Campus, medical graduates returned to the School where, under a blue and white striped tent in the courtyard of Harkness Hall, Dean of Students Howard Levitin welcomed them and their families and friends. Dr. James P. Comer, associate dean, awarded more than 20 prizes and honors to graduates who had excelled during their four years as students.

The ninety-nine members of the Class of 1983 then filed to the podium to receive their diplomas and congratulations from Dean Robert W. Berliner. Six were awarded the M.D./Ph.D. degree: Richard M. Cawthon, John R. Chailliet, Robert O. Kenet, Marshall Mandelker, Eric J. Nestler, and Pamela L. Zeitlin. In addition, Joe Gaston Guillemin received a joint M.D./M.P.H. degree.

Following the presentation of degrees, the new doctors took the Hippocratic Oath, led by Dr. Alan C. Mermann, chaplain of the School. Dr. Robert H. Gifford, professor of medicine, delivered the commencement address, excerpts from which appear on the preceding pages. A gala buffet luncheon served on the terrace of Harkness Hall concluded an occasion both solemn and joyous.

For the second year, the Department of Epidemiology and Public Health abandoned its traditional blue and white tent, and held commencement exercises in the more weatherproof Yale Repertory Theater. Chairman Jan A.J. Stolwijk welcomed the graduates and their guests, and Dr. Kyle Graziere, assistant professor of public health, presented the diplomas.

The commencement address was given by Dr. Colin White, Ira Vaughan Hiscock Professor of Public Health. Announcement of the E. Richard Weinerman Fellowships was made by Dr. Arthur J. Viseltear, associate professor of history of medicine and public health, and Dr. Diana B. Fischer, senior research associate and lecturer in public health, announced the Richard H. Schlesinger Fellowship and the Kathleen Hara Howe Scholarship. Dr. James F. Jekel presented the award of certificate, preventive medicine residency program.

In addition to the 74 graduates who received M.P.H. degrees, four E.P.H. students received Ph.D. degrees, awarded at the Graduate School. They were: Susan E. Brown, Priscilla F. Canny, Gretchen S. Dieck, and Rebecca T. Zagranski.

Following the ceremony, the graduates and their guests were feted at a buffet luncheon party.
SECOND YEAR STUDENT AWARDED ALF STUDENT RESEARCH FELLOWSHIP

Michael L. Grossbard, a second year student, has been awarded a Student Research Fellowship from the American Liver Foundation. Mr. Grossbard is studying the biochemistry of blood following liver damage in the laboratory of Dr. James L. Boyer, professor of medicine and director of the Liver Study Unit.

A national voluntary organization, the American Liver Foundation provides facts about liver disease, the fourth leading cause of death to age 65. The Foundation is currently planning a national campaign to increase public support for liver research.

YALE STUDENT RECEIVES AOA AWARD

Matthew R. Moore, Class of 1986, was one of five students to receive the first annual Alpha Omega Alpha Student Research Fellowship Awards. The Awards were established last year to make available up to five $1,000 prizes annually in support of student research. The 1983 award winning research projects were considered the “most promising” of 33 proposals of impressive quality received, according to the AOA award committee. In addition to Mr. Moore, recipients were from Case Western Reserve University, the University of Pennsylvania, University of California, San Francisco, and Mount Sinai School of Medicine.

RECEPTION FOR CLASS OF 1983

The Association of Yale Alumni in Medicine held a reception on April 22 for members of the medical class of 1983. It was well attended by students in the graduating class and by a number of local alumni. Dr. Nicholas Spinelli extended greetings on behalf of the Alumni Association. It is planned to make such a reception honoring the graduates an annual event.

AWARDS AND HONORS 1983

Each year, members of the faculty and house staff are honored by colleagues and students for their various contributions to the medical profession. The 1983 awards reflect the continuing regard at the Yale-New Haven Medical Center for excellence in patient care as well as for teaching and research accomplishments.

The Betsy Winters House Staff Award is presented annually to the member of the house staff of Yale-New Haven Hospital who has made the most significant contribution toward the education of medical students. The selection is made by the 4th year class, who this year presented the award to Bernard Shen, Class of 1981, who is a second-year resident in medicine.

Dr. John Mellors, assistant professor of medicine, received the Benedict R. Harris Award. Established in 1967, the award is made annually to the attending physician who has contributed the most to the teaching of the house staff.

The Samuel D. Kuskin Award for research accomplishments during residency. This year, a first place award was presented to Dr. Robert B. Innis, and second place awards were presented to Dr. Alan Breier and Dr. Jeffrey Satinover.

FIVE ON FACULTY BECOME PROFESSOR EMERITUS

Five professors in the School of Medicine retired from the faculty on July 1.

Dr. Stephen Fleck, professor of psychiatry and public health, and for many years, psychiatrist-in-chief of the Yale Psychiatric Institute, is well known for his studies on schizophrenia. A member of the faculty for thirty years, Dr. Fleck received his M.D. degree from Harvard University following studies at the University of Frankfurt and the University of Amsterdam.

As a leader in the application of clinical psychology to pediatric research, Dr. Ethelyn H. Klatkin has been a pioneer in developing rooming-in and other models of care for mothers and newborn children. A professor of psychology in pediatrics at the Child Study Center, Dr. Klatkin received her B.A. degree from the University of Mississippi and her Ph.D. degree from Yale University. She has been a member of the School of Medicine faculty for almost 37 years.

Dr. Robert M. Lowman, professor of diagnostic radiology, is former director of the Memorial Unit radiology service at Yale-New Haven Hospital. He is well known by students, house staff, and attendings as an enthusiastic teacher. A member of the faculty for 31 years, he is a graduate of Harvard College, and the University of Maryland School of Medicine.

Chairman of the Section of Cell Biology since it was established in 1973, Dr. George E. Palade was co-winner of the 1974 Nobel Prize for Physiology and Medicine for his discoveries on structural and functional organization of cells. Dr. Palade, who is Sterling Professor of Cell Biology, will continue his association with the School as Special Advisor to the Dean and a senior research scientist in Cell Biology.

The chairman of the Department of Microbiology from 1950 to 1961, Dr. Henry P. Treffers, professor of pathology, has been on the faculty for 38 years. An authority on the chemical aspects of immunity and of microbial resistance to chemotherapeutic agents, he received his B.A. and his Ph.D. degrees from Columbia University.
MENTAL HEALTH, MENTAL ILLNESS, AND THE FAMILY

The Department of Psychiatry sponsored a conference in June on key aspects of the family in health and illness to honor Dr. Stephen Fleck, professor of psychiatry and public health and deputy chairman of the department. Dr. Fleck's pioneering research at Yale spans the areas of family studies and schizophrenia as well as treatment and preventive strategies.

The program held on June 10 and 11 was introduced with opening remarks by President A. Bartlett Giamatti and Deputy Dean Arthur Ebert, Jr., who spoke on behalf of Dean Berliner. The keynote address was given by Dr. Daniel X. Freedman, chairman of the Department of Psychiatry at the University of Chicago. Speakers on the scientific program included Dr. Theodore Lidz, Sterling Professor Emeritus of Psychiatry, who was responsible for bringing Dr. Fleck to Yale in 1953.

A banquet for Dr. Fleck held on Saturday evening, June 11, at the Park Plaza Hotel was attended by those who had participated in the conference and about three hundred guests. A number of Dr. Fleck's colleagues and former students paid tribute to him in a series of after dinner talks.

DR. SOLNIT FETED

Dr. Albert J. Solnit, Sterling Professor of Pediatrics and Psychiatry, was honored at a gala reception held in the University Commons—Woolsey Hall on Sunday, May 15. The occasion, which was attended by several hundred representing both town and gown, celebrated Dr. Solnit's seventeen years as director of the Yale Child Study Center and his appointment as Freud Memorial Professor at University College, London for the the year 1983–84.

Having served as director of the Child Study Center since 1966, Dr. Solnit has relinquished this position to devote his full attention to research, patient care, and teaching. Following a sabbatical year at University College London, he will return to Yale in 1984.

DR. KLATSKIN IS HONORED

Former fellows of the Liver Study Unit convened on June 2 and 3 for a scientific program honoring Dr. Gerald Klatskin on the fifth year of his retirement. The program of 16 scientific presentations, covering a broad range of topics related to liver function and disease, effectively demonstrated the significant contribution Dr. Klatskin has made to the field of hepatology.

Dr. Klatskin, who is David Paige Smith Professor Emeritus of Medicine, came to Yale in 1933 as an intern in medicine. He has since earned recognition not only as a leader in liver research, but also as an outstanding teacher. In May, the American Gastroenterological Association honored him with its highest award, the Julius Friedenwald Award, for his distinguished contribution to the field of gastroenterology. It was presented to him by Dr. James L. Boyer, who succeeded him as director of the Yale Liver Study Unit.

The Gerald Klatskin Yale Liver Library is being established to provide permanent archives for Dr. Klatskin's collection of over 50,000 color slides from 10,000 liver biopsy specimens. Alumni and friends are invited to contribute to the fund in care of Dr. Boyer, Yale Liver Study Unit, 333 Cedar Street, New Haven, CT 06510.
The following members of the medical faculty were promoted to professorships effective July 1983: Ian M. Armitage, Ph.D., professor (adjunct) of research in molecular biophysics and biochemistry; Edward Dunn, M.D., clinical professor of surgery; John E. Fenn, M.D., clinical professor of surgery; Lawrence P. Fielding, M.B.B.S., clinical professor of surgery; Angela R. Holder, L.L.M., clinical professor of pediatrics (law); Sidney Hurwitz, M.D., clinical professor of pediatrics; Charles A. Jane- way, Jr., M.D., professor of pathology; Arthur T. Rosenfield, M.D., professor of diagnostic radiology; John H. Seashore, M.D., professor of surgery and pediatrics; Clifford L. Slayman, Ph.D., professor of physiology; Eiji Yanagisawa, M.D., clinical professor of surgery (otolaryngology); Robert K.-J. Yu, Ph.D. professor (adjunct) of research in neurology.

NEW CLINIC ASSISTS TRAVELERS TO THE TROPICS

Connecticut area vacationers, scholars, businesspeople and other travelers abroad will be interested to learn that a Tropical Medicine and International Travelers Clinic has been established by the Department of Internal Medicine. Located in Yale-New Haven Hospital, the Clinic’s staff are specialists in the prevention, diagnosis and treatment of tropical diseases and other medical problems encountered in foreign travel.

“Each year, many business and vacation travelers leave the United States without adequate medical information or preparation for their trip abroad,” according to Dr. Michele Barry, who with Dr. Frank J. Bia, directs the Clinic. “Lack of proper vaccinations, failure to take precautions against malaria and other tropical diseases, and a poor understanding of how infectious diseases are communicated can often result in needless illness.”

Dr. Barry and Dr. Bia, who are assistant professors of medicine, have had extensive experience in evaluating and treating medical problems of the tropics at the Hospital Albert Schweitzer in Haiti, and in Southeast Asia. Dr. Barry is director of the Southeast Asian Refugee Clinic at Yale-New Haven Hospital, whose service not only to refugees, but to travelers to that area as well, prompted the development of the Tropical Medicine and International Travelers Clinic. In addition, another member of the medical staff, Dr. David Melchinger, associate clinical professor of medicine, was involved in the smallpox eradication program in West Africa.

The Clinic offers a unique service to residents and businesses in Connecticut and surrounding areas, according to Dr. Bia. “Most medical training in this country does not include very extensive study of tropical diseases, so few physicians and other medical professionals are able to offer the kind of service and experience that are available in the Clinic.”

In addition to familiarizing travelers with the international vaccination requirements for diseases such as cholera, yellow fever, and smallpox, and initiating or updating immunization for polio, tetanus, typhoid and cholera the Clinic provides an effective regimen for malaria prevention, particularly for travelers to areas where drug resistant strains of the disease are likely to be encountered. They will screen patients for previous tuberculosis exposure, as well as for immunity to hepatitis, and will administer gamma globulin when required. Physicians referral when abroad is provided, and individuals with medical problems will be advised if their current therapy needs specific revision for the trip.

On return, travelers may be screened for recent exposure to tuberculosis; tested for the presence of intestinal parasites or pathogenic bacteria; and given a course of therapy to prevent delayed attacks of malaria. The Clinic strongly recommends that travelers visit there, when possible, at least four to six weeks prior to departure.

Mt. Holyoke College conferred an honorary Doctor of Science degree on one of its distinguished alumnæ, Dr. Ruth Whitemore, clinical professor of pediatrics. The citation read in part, “Through your clinical proficiency and sensitive concern for children, together with your intense dedication to medical education, you provide a role model that has influenced thousands of nurses and physicians to follow in your footsteps. Your career is proof positive that the successful practice of medicine is more art than science; few physicians can present such an enviable record of achievement.”

Dr. Paul G. Barash, chairman of the Department of Anesthesiology, was named president-elect of the Society of Cardiovascular Anesthesiologists. The Society is an international organization of specialists in the field of anesthesia for cardiac, vascular and thoracic surgery. Dr. Barash had previously served as chairman of the Research and Education Committee, and most recently, as chairman of the Program Committee.

The American Psychiatric Association presented the 1983 Samuel G. Hibbs Award to Dr. John Strauss, professor of psychiatry, for his work on understanding of psychiatric disorders. The prize is awarded annually to honor contributions to clinical research in psychiatry.

The American Association for the Advancement of Science elected Dr. Lawrence Marks, associate professor of epidemiology and psychology, a fellow of the association. Dr. Marks, who is also a member of the scientific staff of the John B. Pierce Foundation Laboratory, is well known for his research in psychophysics.

Dr. Eleanor Adair, another member of the Pierce scientific staff, was also elected a fellow of the AAAS.

The 42nd Annual Chapin Medal of the Rhode Island Medical Society was presented to Dr. Alvan R. Feinstein, professor of medicine and epidemiology. At the presentation ceremony, continued on next page
held on June 7, Dr. Feinstein delivered a talk on "Clinical Epidemiology: An Additional Basic Science for Clinical Medicine." The medal commemorates Charles V. Chapin, an internationally known public health authority. Previous faculty to receive this honor were Drs. Francis G. Blake, Stanhope Bayne-Jones, and John Rodman Paul. Dr. Leona Baumgartner, Class of 1934, also received this medal.

The Federation of American Societies for Experimental Biology and The Burroughs Wellcome Fund have awarded Dr. Henry J. Binder, professor of medicine, a 1983–84 Wellcome Visiting Professorship in the Basic Medical Sciences. Dr. Binder who is well known for his research in gastroenterology, will spend several days teaching and participating in seminars with students and faculty at the University of Nevada School of Medicine, and deliver a Wellcome Lecture in the Basic Medical Sciences. The awards were established to stimulate interest in the basic sciences and to recognize eminent scientists.

RICHARD K. GERSHON, M.D.

Dr. Richard Keve Gershon, professor of pathology and biology, died at home on July 11, 1983, after a long struggle with lung cancer.

He was born in New York City on December 24, 1932. A cum laude graduate of Harvard College, he entered the Yale University School of Medicine in 1954. After interrupting medical school for a year of research training in Paris, he received his M.D. degree from Yale in 1959. He received his training in Pathology at Yale, and became acting chief of the Viral and Rickettsial Diseases Medical General Laboratory of the United States Army in Japan. He joined the faculty of the Yale Pathology Department in 1964. He became interested in immunology as part of his research on the factors regulating tumor growth, and in 1967 he spent a year furthering this interest as a visiting professor at the Chester Beatty Research Institute in London. After his return to Yale he became chief of the Division of Immunology in 1976, and was appointed director of the Laboratory of Cellular Immunology of the Howard Hughes Medical Institute at Yale in 1977. He was elected a member of the National Academy of Sciences in 1980.

His research in immunology led to the discovery of subsets of T-lymphocytes, and in particular to identification of the suppressor T-lymphocyte. These discoveries demonstrated that immunity is not merely the result of an induction of a response but rather a highly controlled sequence of events. He identified an immunoregulatory circuit which consists of inducer cells, precursor/amplifier cells, and effector cells, which may either induce or suppress the immune response. In his own colorful way he described this system as "an immunologic orchestra" which could play a variety of symphonies known as immune responses. It was his discoveries that allow us to further explore the mechanisms of the immune response to foreign invaders; and, perhaps most important of all, the reaction of the body to atypical proliferation, or cancer.

He was widely recognized for his achievements, and just this year he received the George Thorn Award for outstanding medical research, and the Gairdner Foundation International Award for outstanding discoveries in medical science.

To his classmates and friends he will be remembered for more than his scientific achievements. A connoisseur of wine and food, an enthusiastic sports fan, a world traveller, and a friend with a memorable sense of humor, he shared his joy in life with all around him. Whether as scientist, teacher, classmate or friend, he left a legacy to all of us.

Dr. Gershon is survived by his wife, the former Robyn Mione, a daughter, Alexandra, his parents, and a brother, Dr. Michael Gershon, chairman of the Department of Anatomy at Columbia University.

KATHARINE C. ANGELL

Katharine Cramer Angell, the widow of James Rowland Angell, president of the University from 1921 to 1937, died on July 22, 1983, at the age of 93. She was a long-time friend and supporter of the School of Medicine. Contributions in Mrs. Angell's memory may be made to the Katharine C. Angell Medical Student Loan Fund, which was established in her honor on the occasion of her ninetieth birthday.
ALUMNI WEEKEND 1983

Alumni weekend gets better each year. The varied and interesting programs offered—a neat balance of intellectual stimulation, sociability, and nostalgia—has been attracting alumni back to the Sterling Hall of Medicine in increasing numbers, and, the more, the merrier.

This year, several events which were planned to coincide, added further dimension to Alumni Weekend, which began unofficially on Thursday, June 2, with a scientific program honoring Dr. Gerald Klatkin, the former director of the Liver Study Unit. The next day, the program assumed a festive air, with interesting feature events and superb side shows as well.

The Yale Alumni in Ophthalmology held its annual day-long meeting with symposia on the "Treatment of Hyphema" and "Diagnosis and Treatment of Congenital Leukokoria) Syndromes Including Pars Plicata Surgery". Dr. Morton F. Goldberg, professor and chairman of the Department of Ophthalmology at the University of Illinois, was the guest speaker.

That morning, a symposium marking the 60th anniversary of the School of Nursing, "Toward Humane Two-Tier Health Care", attracted a large audience. Uwe Reinhardt, professor of economics and public affairs, Woodrow Wilson School of Public Health and International Affairs at Princeton, interspersed his talk with harsh facts and pithy humor.

At the same time, the Association of Yale Alumni in Public Health (AYAPH) and the Yale University Hospital Administration Alumni Association (YUHAAA) held their annual workshops and jointly sponsored a symposium on "The Administration's View of the Federal Government's Role in Medical Care and Public Health". Keynote speaker, Dr. Robert J. Rubin, assistant secretary for planning and evaluation, U.S. Department of Health and Human Services, gave the Reagan Administration "A" for effort in improving the nation's health care system.


Following her talk, Dr. Jan Stolwijk, chairman of the Department of Epidemiology and Public Health, described research he and his colleagues are conducting on the effects of indoor air pollution, and new methodology they are developing for assessing such information. Dr. Stolwijk has been a strong advocate of federal environmental regulations based on more and better scientific information.

As expected, the YUHAAA's annual workshop addressed "Prospective Payment and Diagnostic Related Groups", with a talk by John D. Thompson ('50), professor of public health and nursing administration, who was one of principal authors of the controversial plan. He also spoke the next day in an Alumni Day seminar on the same subject.

The EPH alumni program attracted one of the largest alumni audiences ever. Over 100 attended the reception and dinner held on Friday night in the Presidents Room at Woolsey Hall.

On Saturday morning, still more alumni arrived at the Rotunda for a day beginning with remarks by President A. Bartlett Giamatti, followed by four extraordinarily interesting and timely seminars. Dr. Edward Adelberg was moderator for "Introduction to Genetic Engineering", which included talks by Dr. William Summers on "Genetic Engineering in Research on Gene Structure and Organization", and Dr. Michael Kamarack on "Genetic Research on Gene Expression".

Dr. John Dwyer held an enthusiastic audience overtime with his talk on "The Immunological Twilight Zone: Evidence for the Mind's Ability to Manipulate Immune Defense Mechanisms". The promises and problems of DRGs were again explored by Professor Thompson, joined in this seminar by Dr. Joanne Finley, who was Commissioner of Public Health of New Jersey when that state was the first to use the system. The fourth seminar was given by Dr. Leo Cooney and Dr. Andrea Schaffner, who discussed the increasingly important topic of "Physicians and the Aging Society".

The remainder of the day was divided between business and entertainment, with the annual meeting of the Association of Yale Alumni in Medicine followed by the traditional sherry hour and buffet lunch, and at 4:30, a Social Hour was held in the Hope Building. Reunion classes held their individualclass dinners that evening.

Throughout the weekend, many alumni were overheard praising Laurence Kaplan, associate dean for community and governmental relations and alumni affairs, and Constance Toliver, his senior administrator, for their very competent and creative planning and implementation of the Alumni Weekends.

REUNIONS

1928

Fifty-fifth

No Report Received

1933

Fiftieth

Yale Medical School's class of 1933 was represented by four graduates at their 50th reunion June 3 and 4, but they agreed that what was lacking in numbers was made up in fun and enthusiasm. Of the 38 who graduated in 1933, only 21 are known to survive.

The events of Friday, June 3 and Saturday, June 4, described elsewhere in this issue, provided us with some interesting choices. There were also social hours each afternoon.

Saturday evening the Yale Medical Alumni Association hosted a great dinner at the Graduates Club for the class of 1933. Present from our class were thoracic surgeon Francis Woods of Jaffrey, New Hampshire (who came 3 days early for an Alumni College seminar on computers), internist Ray Miller of Trenton, New Jersey, pathologist Robert Huntington of Cambria, California and public healther Franklin Foote of Wethersfield, Connecticut—the latter three were accompanied by their wives. Present were officers of the association, also acting dean Art Ebbert, associate dean Lou Kaplan, former dean Vernon Lippard (29) who was an intern in pediatrics when we were in school, and Harry Zimmerman (27) who taught us pathology.

Messages came from some classmates: Jack Wolfe of Naples, Florida
reported having enjoyed 13 years in India and China and having learned that pitching bales of hay over a fence can produce disc problems; Joe Mig-
none of North Haven has arthritis which kept him home; Ashley Pond of Taos, New Mexico found that a cervical laminectomy last year put a stop to skiing, at least for now; Dan Harvey is in a skilled nursing facility in Hanover, New Hampshire; Paul Saffo of Roll-
ing Hills, California, has a daughter who is professor of biology at Swarthmore and a son who is an att-
orney; Ed Seelye of Berkeley, Calif-
ifornia, who practiced surgery in Worceter, Massachusetts lost his wife in 1978 but has remarried the widow of his roommate at Amherst.

The big news is that our class did nobly in supporting the Medical School Alumni Fund in our reunion year to provide student loan funds. We had the highest per cent of contributors—67%—of all medical school alumni, and the highest average gift of $375. Congratulations to all who helped us go over the top!

Franklin Foote

1943 (March)

Fortieth

The fortieth reunion was, indeed, outstanding and most deserving of superlatives. The attendance was the best ever, with 20 classmates and 16 spouses. We invited the three who had to drop behind when attacked by the "red raider" and two of them attended—Priscilla Dienes Taft (with her husband, Edgar) and Donal Dunphy. It was the first reunion for approximately five people. As for dona-
tions to the Medical School Alumni Fund, our class ranked first of all classes this year both for total amount contributed and for percentage of class contributing, as of June 4.

Those present were: Ralph Alley (Jane), Bill Davey (Artemis), Chuck Dowling, Rocky Fasanella (Marion), Tom Flynn, Gerry Fountain (Polly), Stu Joslin (Dorothy), Len Kemler (Joan), Doug Lindsey, Henry Mark-
ley (Mary), Dee Peck (Hugh Dwyer), Ed Rabe (Emily), Mark Sanford (Mildred), Ted Soule (Florence), Hilly Spitz (Norma), Sophie Trent Stevens, Bob Taylor (Chris), Fred Waldron (Polly), John Weber (Clare), Morris Wessel (Irvingard).

Many of us attended the Dean's Re-
ception Friday, continuing Saturday morning with the lectures which vividly showed aspects of the changes in the bio-sciences in the past 40 years. In the afternoon several classmates toured the recently completed modern hospital and other buildings of the Yale-New Haven Medical Center, which is such a spectacular contrast to the old New Haven Hospital we eagerly wandered through 40 years ago. We concluded with dinner for 39 at the Graduates Club (where 40 years ago women could not enter through the front door and could dine in one side room only).

Ralph Alley an outstanding and lively master of ceremonies, recalled many unusual and amusing incidents of our student days. He also reminded us, with some help from Dr. Fulton's diary, of the stress, worry, tragedy and tension of our last sixteen months at Yale due to our entrance into World War II. He recalled our dignified and impressive graduation in the Histori-

Don Dunphy claims the most aston-
ing recent achievement—he has a two-year-old baby! He also wins first prize for having the youngest child in the class. Hilly Spitz has two sons who are physicians.

Doug Lindsey travelled the farthest (from Arizona) to come to Reunion. Five of those present have retired completely, although still carrying on medically related administrative or consulting activities. Three are working shorter or fewer days. The other thirteen are still hard at it full time. A more detailed account of the careers of the entire class will be mailed to each member of the class soon.

Overall, it was a highly successful and enjoyable weekend. We hope to see many more of the class at the forty-fifth reunion.

Dorothea R. Peck

1943 (Dec.)

Fortieth

Our 40th class reunion went beautifully, although we missed those of you who couldn't make it.

It began at the Dean's Reception Friday afternoon when I found Bob Bradley and his wife Betty, who had come down from Boston, along with Hoyt Miles and his wife Luana from Reno and Bob Furman and his wife Mary Frances from Indianapolis. The Dean's Reception was delightful and went on long after the dinner hour. You might be interested in learning that the fortuitous circumstance which graduated two classes in 1943 (ours and the one ahead of us) causes both classes to have reunions the same year.

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Dorothea R. Peck
For this reason we get to see and renew acquaintances with a number of those from the class just ahead of us. A number of these people were at the Dean's Reception and we saw them elsewhere during the weekend.

The following morning we had the opportunity to attend one of several seminars, while some of those attending the reunion went on a tour of the new Museum of British Art at the main Yale Campus.

Saturday morning Ronnie Cook and his wife Fran from Hartford joined us, and John Almklov and his wife Dorothy arrived from Bakersville, California. A beautiful open-air tent luncheon was served on the greensward in front of the residential hall. At the sherry hour preceding the luncheon Fred Haddad from Ansonia joined our reunion group.

Saturday evening we had a delightful reunion dinner at Tom Bucky's house in Weston, near Bridgeport. Tom and his most gracious wife Doris put on a beautiful meal for us. We were pleasantly surprised on arrival to find Ira Rashkoff and his wife Gladys awaiting us there, having driven up from White Plains. Joe Epstein had indicated that he would get over to the dinner from Middletown but was unable to make it. Fred Haddad also was unable to get there although he had hoped to.

I am going to write you all a long detailed letter later this summer. The Alumni Office will send this out for us, so don't throw a letter from the Alumni Office away unopened on the assumption that it is just another mass mailing! Jim Bradley (and Ann)

1948
Thirty-fifth

Some of the members of the Class of '48 began their reunion festivities by meeting at Gail and Rus Barnett's home on Friday evening. It was a very informative get-together because we inspected the brand new Barnett kitchen and learned that Rus has gourmet cooking skills and the necessary accessories. (Perhaps, this will be the site of our next class reunion dinner. — Just joking, Rus.)

Dinner at Mori's on Saturday, June 4, 1983, was preceded by a moment of silence in memory of departed classmates — Bob Maurer, Bob Lawson, Gabe Saviano and Jim Leslie. Those attending dinner were: Edith Beck, Gail and Rus Barnett, Cecilia and Art Coleman, Amy and Jerry Shapiro, Nan (Godley) and Walter St. Goar, Sylvia (Preston) Griffiths and Ray, Betty and Paul Goldstein, Nora and Ben Rush, Gerry and John Morrison and Lorraine (formerly, Dr. Gardner's technician) and yours truly. There was no formal program, but each class member had an opportunity to talk about their own achievements or families. Rus Barnett provided his usual update on activities at the medical school and the current student body.

A lot of class members sent their regrets about missing the 35th reunion dinner. Jeanne and Hal Griffith had to cancel out 3 days before the reunion! Marty and Bob Downie had previously scheduled, and paid for, a trip down the Colorado River. Bernie Naab couldn't attend because he had just lost his partner. Bud Rowland was in Europe. Ruth Cortell sent news about herself and her family. Jerry Nowlis, Howie Simon, Paul Talalay, Jane Andrews Rivers, Al Blaustein, Betty (McCleary) Hamburg, Vic Drill, Ray Johnson, Dick Peterson, Al Bridge, Dick Hannah and Al Green expressed regrets in not being able to attend. Probably, I've missed others, too.

In closing, the class of '48 placed third in total monies collected for reunion year classes. Thirty-one classmates contributed $6,571, an average of $212 per gift. This, too, placed us third again, behind the classes of 1933 and 1943 (March). My sincere thanks are conveyed to Nan (Godley) St. Goar, Sylvia Preston Griffiths, Hal Griffith, and John Morrison who so kindly helped me with the "Phonathon," which made all this happen. Thanks, too, to all the faithful contributors to the Yale Medical School Alumni Fund, whose monies are used for loans to medical students. Paul Koehler

1953
Thirtieth

Our class reunion began on an auspicious note Friday afternoon with a Symposium presented by 1953 graduates and co-sponsored by the Department of Surgery, Dr. Arthur E. Baue, chairman. The participants were: Lou DelGuerico, Don Etzwiler, Vince Gott, and Bill Whalen.

As we did five years ago, Maureen and I hosted dinner at our North Haven home Friday evening. While we were only fourteen around the dinner table in 1978, this time we totaled twenty-five! Attending were: Jeanne and Remi Cadoret from their Iowa farm; Paula and Lou DelGuerico from Westchester; Doe and Jim Dunn of New Jersey; Marion and Don Etzwiler from Minneapolis; Betty and Tom Gentsch of Miami; Ivecagh and Vince Gott from Baltimore; Bob Hamilsch and his new wife, Robin, from Ithaca; New Yorkers Carol and Fred Lane; Ora and Howie Smith of New Haven; Betty and Lynn Stoker from Albert Lea, Minnesota; Bill Whalen of Willimantic, without Nina, who had become ill; and Martha and Bill Wilson from Storrs, Connecticut. Conversation was animated as we reminisced and updated.

On Saturday evening twenty-three of us gathered in the elegant Board of Governors Room of the Quinipiac Club for a delicious dinner. Unable to remain from the Friday gathering were the Gotts, Lanes, Wilsons, and Bill Whalen. However, the following were able to join us: New Haveners Joan and Al Chetrick; Hyla and Bob Melnick from Larchmont; Harvey Peck of Mahwah, New Jersey; and, all the way from San Juan, Leila and Jose Ramirez-Rivera. Following dinner, each of us had an opportunity to share personal and professional activities.

Although each graduate present tried to update those assembled on the whereabouts and whatabouts of the absent brethren, it would be great to hear from each of you.

Look forward to seeing you at our thirty-fifth in 1988! Harold D. Bornstein, Jr.

1958
Twenty-fifth

The twenty-fifth reunion of the class of 1958 got off to an impressive start with our meeting in the Beaumont Room of the Sterling Hall of Medicine. Surrounded by the portraits of our elegant professional ancestors, Mike Kashgarian had put together a stimulating introductory program, which was entitled "The Maturation of the Class of 1958." Emeritus Dean Tom Forbes recalled some of our finer moments, and then Paul Rudnick, Lee Phillips, and Gerry Burrow each spoke for a few minutes about their professional lives and how their expe-
eriences at Yale had affected them. Deputy Dean Art Ebbert made a presentation to Dick "The Gooch" Gershon's wife and family honoring Gooch's tremendous scientific contributions in the field of immunology. Because of Gooch's illness, he was unable to attend, but we were all deeply touched with the warmth of the presentation.

Friday evening, large numbers of the group enjoyed an outdoor concert by the New Haven Symphony, which fortunately was not rained out. The next morning, we were pleased to hear President Giamatti address the visiting alumni on the problems of the medical school and, particularly, in choosing a new dean since Dr. Berliner will be retiring this coming year. We then had the opportunity to listen to stimulating programs varying from the practical aspects of the DRG's to molecular biology, and then a pleasant luncheon was held in the Harkness dining room. That evening, the crowning achievement of our resident reunion arranger, Mike Kashgarian, was presented. Whether or not the Quinnipiac Club will ever allow members of the class of '58 through its doors again is purely speculative at this point. At any rate, Mike saw to it that the kitchens and the wine cellars prepared a feast which was truly elegant. After a few moments of pleasantries, the toasting began. Everyone rose and said a few well-chosen words about classmates and their experiences, which began nearly 30 years ago. Those of us present at the reunion certainly missed seeing the other classmates, and do hope that we will hear from them via the Alumni News and certainly at our next reunion in five years.

Just as this report was going to press, we heard the sad news that Dick Gershon died at home on June 11, 1983. Paul A. Rudnick and Michael Kashgarian

P.S. For those of you who deny the allegations regarding the Quinnipiac Banquet, I (Paul) have pictures in living color to support my contentions, and they are available for review upon request.

1963

Twentieth

Twelve members of the Class of '63, ten of whom were accompanied by their spouses, met for our twentieth reunion dinner at the Graduates Club on Elm Street. Peter Gregory, who toils in academia in sunny California, won the prize for coming from the most distant location. Peter's daughter, when she enters Yale as a freshman in September, will join the Dalsimer, Edin, Gaudio, Kaplan and Meltzer families in making regular tuition payments to Yale. Of that group of proud parents, Jim and Adele Dalsimer sent regrets (Jim is now in private psychiatric practice in Boston, and Adele is assoc. prof. of English at Boston College.) The Edins, Gandios and Kaplans were all in attendance. Andy and Becky Edin were runners-up toPeter for the travel award (Winona, Minnesota). The Edins enjoyed the hospitality of Jon and Jean Fessel, in Guilford, during their stay in Connecticut. Jon refuses to accept the distinction of "only grandfather" in the class (son Michael, 27, has two sons, Nick, age 5, and Tony, age 3), until we hear from Gary Van Gaider. At the other end of the spectrum, Dudley Danoff, who was unable to attend, writes, "My two kids (by my first and only marriage) are 22 months and 3/5 years respectively..." Dudley also writes that he had spoken with John Conte, who lives in San Francisco, and who apparently is the proud father of a brand new baby girl, as of April 1983 (child #1, wife #1, duly reported.) Herb Meltzer, who is now professor of psychiatry at the University of Chicago, and director of a research unit at the Illinois State Psychiatric Institute, was unable to join us. Our thanks to Judy Davis, who practices psychiatry in Chicago, and whose husband directs a similar unit, for passing on the gossip. Rounding out the group for dinner, were the Peter Tishlers (Peter is doing research in human genetics and running a house staff training program in medicine at the Brockton, Mass. VA), the George Holstens (George is a pathologist in Springfield, Massachusetts), Jay Pomerantz, who is practicing psychiatry in Longmeadow, Massachusetts, with his wife, Farida; Craig and Gail Llewellyn (Colonel Llewellyn is professor and chairman, Department of Military Medicine, at the Uniformed Services University School of Medicine, in Bethesda) and the Bill Lehnmarks, Bill is practicing EN1 in Hartford. Also practicing in Hartford, in pulmonary disease, Bob Mueller reported that his daughter Sarah will be a freshman at Wellesley, while his wife Marnie, who is a vice-president at Connecticut Mutual Life Insurance supports him through his mid-life crisis. Completing the Massachusetts contingent were Al and Suzanne Wise, making the trip from Williamsport.

Among those who were unable to come to New Haven, but sent newsy letters which we all shared at dinner, were Ric and Barbara Almond, who confessed that their oldest son, David, just completed his freshman year at Harvard; Dorothy Ottnow Lewis, who is professor of psychiatry at NYU; Dave Holden, who is directing a family practice residency program in Wich-
ita: Gordy Cohen, who has given up medicine, and is now the prosperous president of Jeneric Industries, Inc. in Wallingford, Connecticut; Chuck Wilson, who is a diagnostic radiologist in Costa Mesa, California; John Genzani, who is chief of nephrology at U. of Vermont; and Alan Shapiro, who after 6 years in Puerto Rico, now practices urology in Los Angeles.

Everyone who was able to attend, really enjoyed the evening. We look forward to a big attendance for our class reunion dinner at Mory's on June 3rd. The grounds of the Association of Yale Alumni was our home base for an all-afternoon gathering on June 4th (these sites won out over the Old Lyme Yale outdoor facility, several local country clubs, and a variety of more formal campus settings, in the hopes that those in the class with children would feel free to bring them to the reunion). Dinner on June 3rd was a time for catching up on the past decade, a bit of which I may recapitulate for those unable to attend.

Jim Neviækas and his wife arrived from the reaches of Illinois, where he is an active nephrologist, while Andrew Kadar returned from vacation in Greece en route to Los Angeles (where he is an anesthesiologist). Rick and Harriet Fingeroth took time from a busy orthopedic practice and several children in Springfield to attend the dinner, as did Rob and Karen Sirotà, who arrived from Philadelphia where Rob is a nephrologist at the Albion Hospital. Sessions Cole arrived from Boston, a lone representative of that northern contingent. It was rumored that Randy Zusman is unable to find his way out of his new mansion in Newton, Massachusetts and that Joe Simeone, Jerry Rosenbaum and Dave Adler remain alive and well in the same city. Lee Goldman is doing well, recently having joined the administration of the Department of Medicine at the Brigham. Bennett and Helene Blitzer have recently moved to Cincinnati, Ohio and Michael Bramley sends his regards from North Carolina, where his pediatric practice was too hectic to allow a jaunt North for our siesta. Word from Mary Ann Brunstetter-Shafer has fulfilled her fourth year class show role in her subspecialty of adolescent VD. John Connors has entered medical oncology in Vancouver while Claes Nilsson (in San Francisco), Paul Abrams (at Frederick, Maryland), Bob Polackwich (in Tampa, Florida) as well as your reunion secretary have all reached the same subspecialty by a variety of routes. John McQuade, III is doing well in cardiology in North Carolina. Chris (Kull) Walsh and her husband arrived from Little Neck, Long Island to bring us good cheer from the Big Apple; Marc Weinberg, Jerry Nagler and others from there were unable to make the festivities. The syndicate continues to gather for intermittent outings, vague details of which filter back to assure us that Dave Peach, Dave Coulter, James Robertson, Chris Reynolds and Joe Connors continue with their previous fraternity. We missed Midge Tripp, who has moved from Morgantown, West Virginia to Michigan and Danny Moros, who was detained in the city with his wife Anne, who has just fulfilled Danny’s ambitions in psychiatry and together had their first child, Elizabeth.

On the afternoon of the 4th, following the lectures and formal activities of the reunion celebration, a stout bunch of holdovers from the preceding evening were joined by Gary Gordon, his wife and children from Philadelphia, and a pleasant cookout was held in the courtyard of the AY A House, arranged by George Lister. We all owe George a vote of thanks. John M. Kirkwood

1978
Fifth

No Report Received

CLASS NOTES

1931

At the 1983 meeting of The American Pediatric Society, the John Howland Award “for distinguished service in pediatrics” was given to Drs. Helen and Harold Harrison. In his presentation speech, Dr. Laurence Finberg began as follows:

“Three special features characterize the thirty-second awarding of The Howland Medal. The first is unique in that the award is to a team of pediatric investigators; a married couple, Helen C., and Harold E. Harrison. Secondly, more than in most years of honoring the distinguished men and women of pediatrics, this one clearly illuminates the strong generational ties and continuity in American pediatrics during the seventy-eight years since John Howland became a member of The American Pediatric Society. Finally, this year’s award recognizes excellence across the whole
spectrum of pediatrics specified in our constitution; advancement of knowledge, education, clinical treatment and prevention of children's diseases, and also humanitarian child advocacy."

He then traced the careers and accomplishments of the Harrisons when they were at Yale and subsequently at the New York Hospital and then at Johns Hopkins and the Baltimore City Hospital. In conclusion, he observed: "They have carried the torch of American pediatrics from those following the founding generation to our contemporary one. They have given us an impressive, even awesome, example and challenge." This presentation speech will be published in its entirety in Pediatric Research at a later date.

1960

Alan Ames wrote recently in regard to the erroneous report of his death in the spring issue of Yale Medicine: "Dear Classmates: I am happy to inform you that the report of my death was premature. My health remains excellent, and I am enjoying the practice of cardiology, and life in general, out here in Oregon."

1961

Robert Levy has been appointed vice president for health sciences at Columbia University, effective July 1. Dr. Levy will have primary responsibility for the health sciences at Columbia as the senior university officer on the Washington Heights campus. He will oversee the activities on that campus and supervise the deans of the Schools of Medicine, Dental and Oral Surgery, Nursing and Public Health while providing overall direction and coordination to Columbia's health sciences programs.

Since 1981 Dr. Levy has held the positions of vice president for health sciences at Tufts University and professor of medicine and Dean of the School of Medicine. He was previously associated with the National Heart, Lung and Blood Institute for 18 years, and served as director from 1975 to 1981.

1967

An Artificial Heart Training Program is being planned at Pensacola, Florida's West Florida Hospital under a preliminary agreement signed in April by Hospital Corporation of America, of which West Florida Hospital is an affiliate, and Kolf Medical, Inc., manufacturer of the JARVIK-7 Artificial Heart. The agreement was to be subject to the approval of the University of Utah where an intensive two-year training program is to be held with the goal of qualifying in the use of the JARVIK-7 Artificial Heart.

David Conkle and two other cardiovascular surgeons from Medical Center Clinic and West Florida Hospital will spend about two years studying and performing total artificial heart surgery research in Utah. The team will cooperate with the University of Utah and four to six other institutions in a multi-center series of experimental human artificial heart trials, and it is projected that after approximately two years, it will be prepared to make application for approval to proceed with the highly specialized surgical technique.

HOUSE STAFF

1957-1958

A very successful twenty-fifth reunion of medical house staff (1957-58) was held at the School of Medicine on Saturday, May 21. A morning scientific program was followed by luncheon and a tour of the new Yale-New Haven Hospital building. In the evening, a reception at the home of Dr. Howard Levitin, Dean of Students, was attended by Dean and Mrs. Robert Berliner. The reunion dinner at Moris's was the occasion for reminiscences of house staff days and deeds under the leadership of the chief resident, Robert Petersdorf.

Those members of the medical house staff who attended the reunion included David Bernanke, Rubin Bressler, Alexander Deutsch, Fritz Fenster, Ben Forsyth, Jay Goodkind, Donald Harter, Marie-Louise Johnson, Willard Krehl, Edgar Levin, Herbert Lubs, Jr., Richard Norton, Robert Petersdorf, Robert Rentz, Robert Shope. Most were accompanied by spouses. The reunion was planned by Drs. Forsyth and Harter with the cooperation of the Association of Yale Alumni in Medicine and the School's Alumni Office.

IN MEMORIAM

Inglis F. Frost
April 7, 1983
M. D. '12

Francis M. Dooley
(date unknown)
M. D. '22

Prof. Edward Tolstoi, M. D.
May 22, 1983
ex med '22

C. Eugene Woodruff
April 5, 1983
M. D. '26

George H. Zinn
June 1, 1983
M. D. '27

Norman E. Gissler
(date unknown)
M. D. '28

Arthur J. Gavigan
(date unknown)
M. D. '31

Crawford J. Campbell
June 24, 1983
M. D. '40

Marvin Blum
April 16, 1983
M. D. '41

Ross Lionel Wilson
(date unknown)
M. D. '43

Lawrence J. Morin
May 12, 1983
M. D. '45

Col. F. Joseph Dannemiller, MC
April 30, 1983
M. D. '57

Leslie Plonsky
May 6, 1983
M. D. '79

Lathrop E. Roberts
July 3, 1983
M. D. '57

Martin L. Stein
June 5, 1983
M. D. '30

Paul Watson
May 29, 1983
M. D. '30

Edward A. Cramton
July 13, 1983
M. D. '25

Erratum: In the Spring 1983 issue In Memoriam, Allan W. Ames, M. D. '60, was listed in error based upon a report from the Alumni Records Office. We subsequently learned that the deceased Allan W. Ames was a 1918 graduate of Yale College.
That’s what students at the Yale School of Medicine were saying this past spring as they spent several evenings calling medical alumni across the country to ask for their support of the 1982–83 Medical School Alumni Fund.

That phonathon—the first in Medical School Alumni Fund history—proved to be an enjoyable and worthwhile experience for callers and alumni alike. It offered a unique opportunity for alumni and students to engage in enthusiastic conversation, sharing impressions and concerns, refreshing memories, learning about one another. It also offered more tangible results:

* significant increases in pledge amounts for the Fund, which earned additional dollars from the Baumgartner Challenge
* a substantial number of new contributors to the Fund
* important new dollars for the Student Revolving Loan Fund, which is helping to ease the financial burden of so many Yale medical students

Medical education at Yale can continue to maintain its excellence only with the support of those who have benefited from the School’s tradition of excellence. We need your continuing and generous support.

YALE MEDICAL SCHOOL ALUMNI FUND  
P.O. Box 1890  
155 Whitney Avenue  
New Haven, Connecticut 06508
The illustration shows a caricature of a doctor with a skeleton, which is a common representation in medical history to depict the dangers of neglecting health or the consequences of medical errors. The scene is set in a medical or laboratory environment, with various medical instruments and bottles around. The title of the image suggests a humorous or satirical take on medical practices, possibly highlighting the importance of accuracy and diligence in medical work.
Yale Medicine is distributed to members of the Association of Yale Alumni in Medicine, students, and others interested in the School of Medicine. Communications may be addressed to the Editor, 333 Cedar Street, New Haven, Connecticut 06510

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Cover: To introduce “How Do Ways of Living Affect Health?”, we have selected a print by Thomas Rowlandson, ca. 1811, from the Cléments C. Fry Collection, Yale Medical Historical Library.
HOW DO WAYS OF LIVING AFFECT HEALTH?

By Lisa F. Berkman and Lester Breslow

The purpose of this study is to explore the relationship between certain behaviors and social connections of individuals — ways of living and physical health status — and mortality.

The idea that ways of living are related to health is not new. In the Western World, the Greeks and Romans recognized the importance of preventing illness through living sensibly. Hygeia, the Greek goddess of health, represented the view that “health is the natural order of things, and a positive attribute to which men are entitled if they govern their lives wisely.” Medicine’s most important function, according to this viewpoint, was to discover the natural laws by which human beings were ensured “a healthy mind in a healthy body.” The idea of host susceptibility to illness was part of classical medical thought, and the philosophy of maintaining health by living properly has roots not only in Western, but also in Chinese, Middle Eastern, and other ancient civilizations.

The purpose of this study is to explore the relationship between certain behaviors and social connections of individuals — ways of living and physical health status — and mortality. In our exploration of these relationships, we have been guided by two thoughts. The first is that in most industrialized countries new living circumstances are responsible for an increasingly large proportion of the morbidity and mortality among middle-aged and older adults. These disease determinants reside primarily within the social environment and promote certain distinctive behaviors. They have always been related to health status in some way, but may previously have been obscured by other causative factors including exposure to virulent and infectious organisms.

The second thought concerns the precise role these social and behavioral factors play in causing disease. Most epidemiologic investigations, and medical research in general, focus on the relationship between specific factors and specific diseases. It is becoming increasingly apparent, however, that some factors are associated with a wide range of diseases and may, in fact, influence susceptibility to disease in general. Social and behavioral factors appear to be particularly likely to influence health status in this way. Thus our investigation concentrates on sets of these factors that may be associated with many diseases.

CONCEPTUAL FRAMEWORK

The significance of this work comes from the idea that health and disease arise mainly from circumstances of living. Within rather well-defined biologic limits, the health, disease, and mortality pattern of any community generally reflects the conditions of life in that community. Rural communities with poor sanitation, located in areas heavily infested by parasites, mosquitoes, and other disease agents and vectors are afflicted with one pattern of health, disease and mortality. Urban communities starting on the path of industrialization but affected by crowding, inadequate food, and poor sanitation have another pattern. Modern metropolitan communities with advanced industrialization and reasonably good sanitation, but low physical demand coupled with access to plenty of fatty foods, alcohol and cigarettes, have still a third kind of health, disease, and mortality pattern.

Ways of living in the latter kind of community, just as in the others, underlie the typical health picture found there. Hence, ascertaining specific ways of living that are responsible for the health impairment and premature deaths that occur (or, on the contrary, ways of living that favor health and longevity) may lead to advances in health care. Knowledge that exposure to such disease agents as Anopheles mosquitoes and malaria, snails and schistosomes, drags down the health of a community, open the path to improvement in such communities. Rudimentary industrialization

This article has been excerpted, with permission from Health and Ways of Living by Lisa F. Berkman and Lester Breslow, published by Oxford University Press, October 1983. Dr. Berkman is associate professor of epidemiology and public health.
with accompanying inadequate nutrition, exhaustion, and overcrowding have usually brought misery and premature death from tuberculosis and other diseases and injuries to many people. Knowledge of these relationships has led to social improvement and a healthier life. Correspondingly, knowledge of the precise features of living that harm health and preclude enjoyment of life's potential in the modern communities of the United States and similar countries should lead to further advances in health.

This thought stimulated development of the Health Population Laboratory in Alameda County, California, a community typical of the United States in the late twentieth century. The first aim was to measure health in the sense of the World Health Organization definition, "physical, mental, and social well-being." The second was to examine ways of living in such a community that might contribute to or detract from the health of its people.

One set of ways of living to be studied consisted of seven common habits, such as excessive use of alcohol and cigarette smoking. Early investigations based on the Alameda County data confirmed and extended what was already known about the relationship of obesity, cigarette smoking, excessive use of alcohol, and other habits to health and mortality. A summary health practices score, with one point for each of seven favorable health practices, correlated highly both with physical health status in 1965 and with longevity based on mortality during the next five years. For example, a man at age 45 who was observing six or seven of the health practices had a life expectancy of about 11 years more than that of a 45-year old man with a health practices score of three or less.

Another aspect of living — namely, the nature and extent of a person's social network — also attracted attention as a possibly significant factor in health and longevity. Earlier work by others had shown, for example, that being married was more favorable to health than being divorced, single or widowed. Moving from one community to another, and thereby breaking social ties, appeared adverse to health. Belonging to a church seemed favorable. The original design of the HPL had provided for study of these factors. Thus it became possible to examine the relationship of social networks to physical health and mortality.

According to the HPL concept, health consisted of the three probably interrelated dimensions of well-being: physical, mental and social. Each of these three could be regarded as a spectrum, so that an individual could be located at certain points on all three spectra and these points would represent that person's degree of health. Thus, for example, at age 25 a person would likely fall toward one (the healthy) end of the Physical Health Spectrum, and at age 85 toward the other. Death means reaching the latter end of the spectrum. If these concepts reflect reality, and if health practices and social networks influence both physical health and longevity, then health practices and social networks should also influence one's progress over time on the Physical Health Spectrum. Persons selected at any one time would, as a whole, be expected to move during the ensuing decade toward the less healthy end. Would that average movement toward poorer health and ultimate death, however, be measurably retarded by favorable health practices and strong social networks? Would it be accelerated by poor health practices scores and weak social networks? The HPL provided an opportunity to examine the issue by making available a questionnaire measure of people's physical health status in 1965, their mortality through 1974, and another measure of health status for the same people who survived to 1974 and completed a second questionnaire.

The HPL approach to health — that is, its measurement, what influences it, and, implicitly, how it may be improved — departs from the prevailing scientific focus on understanding the biologic mechanisms of disease as the way to advance health. Discovering the precise mechanism by which cells become cancerous might well open the path toward some means of countering the development of cancer. The same rationale applies generally to other diseases that plague modern humanity. History demonstrates, however, that interventions can be quite effectively planned without completely understanding the biological mechanisms involved. For example, it now appears that the sanitary campaigns, social reforms, and nutrition programs of the nineteenth and early twentieth century had at least as much to do with overcoming tuberculosis, cholera, pellagra, and other infections and non-infectious diseases as did the discovery of the tubercle bacillus and other pathogenic microorganisms, important as these discoveries were. These interventions were frequently based on associations found between contaminated water or dietary factors and disease outcomes without the precise identification of the causal agents involved.

One task for the health scientists, then, is to examine — as people generally do, but more systematically and with scientific rigor — precisely what ways of living preclude or enhance the possibility of maximum health and longevity. Health and ways of living are natural phenomena and as such they are subject to scientific
investigation. The crudeness of our definitions, concepts, and methods of measuring these phenomena only makes the task more challenging, not less important. Advancing knowledge in this direction will, it is hoped, help people who are seeking a healthful style of living in modern, urban, industrialized communities. Developing a knowledge base for guiding such action broadly would carry us beyond such significant but particular items as that cigarette smoking in the early 1980's accounts for more than 300,000 premature deaths in the United States each year, and that excessive consumption of alcohol adds greatly to that toll.

The usefulness of data from the HPL studies, as in any scientific investigation, depends on the methods of data collection. Because of the nature of the investigations intended, the laboratory staff devoted the first five years essentially to developing and testing such methods. That preparatory work enabled them to proceed with data collection that was economical, represented accurately the adult population of Alameda County, showed reliability and validity so far as these could be ascertained, and provided information making it possible to follow up the sample. All these points had to be assured to the highest possible, and certainly to a satisfactory degree, before starting on the main study in 1965.

SUMMARY OF FINDINGS
Of the 2229 men aged 30 to 69 years constituting a 1965 sample of men that age in Alameda County, 9.5 percent died during the period from 1965 to 1974. On the other hand, only 6.4 percent of the 2496 women 30 to 69 years of age in the sample died in that same time period. That mortality picture is consistent with statistics concerning death among all Alameda County men and women of the same age at the time.

Health Practices
Analysis of the data revealed five common habits to be strongly, and each one independently, associated with mortality during the nine years of follow-up. These habits, called high-risk health practices, were smoking cigarettes, consuming excessive quantities of alcohol, being physically inactive, being obese or underweight, and sleeping fewer than seven or more than eight hours a night.

Two additional habits, skipping breakfast and snacking rather than eating regular meals, had been shown in an earlier analysis to be associated with mortality. The earlier analysis covered five and a half years' experience in the entire adult population sample, including those under 30 and over 69 years of age. The analysis reported here indicates that, for persons aged 30 to 69 years, not eating breakfast and snacking do not carry as heavy a mortality risk as the other five health practices.

To construct a simple Health Practices Index for purposes of further analysis, each of the five favorable health practices (ie., not smoking cigarettes, drinking alcohol moderately if at all, being physically active, maintaining moderate weight, and sleeping seven to eight hours per night) was given one point. These points added to a score of 0 - 5 for each person. Thus, people with a score of 0 - 2 can be considered as following high-risk health practices; 4 - 5, low-risk, and 3, intermediate.

Persons following the various individual high-risk health practices experienced death rate 25 - 115 percent higher than persons who followed the corresponding low-risk practices. Mortality, however, showed a strik-
ingly higher gradient with the Health Practices Index that summarized all five health practices for each person. Thus, the death rate among men 30 - 49 years of age with a health practices score of 0 - 2 was 840 percent (8.4 times) as high as that among men the same age with a health practices score of 4.5. For men aged 50 - 59 and 60 - 69, the relative risks were 2.4 and 1.7, respectively. As with practically all risk factor analyses among men, the association was stronger for younger men. Among women, the corresponding relative risks in the three age groups (30 - 49, 50 - 59, and 60 - 69) were 2.9, 2.0, and 4.0 respectively.

These data confirm the strong relationship between number of health practices followed and mortality found in earlier analyses of the HPL data. Interpretation of that association, however, is by no means obvious. Persons who were seriously ill in 1965, and thus likely to die in the ensuing few years, may already have been unable to maintain normal weight, to exercise, or to sleep regularly seven to eight hours a night. A low health practices score, hence, might have reflected poor health and the likelihood of early death, rather than having preceded — and possibly been causally related to — mortality. Do “poor health practices” result in fatal illness or vice versa?

If profound and soon-to-be fatal illness in 1965 had been largely responsible for the low health practices scores in the sample, then the deaths associated with those scores should have occurred mainly among persons who were already disabled in 1965, persons so sick as to be unable to exercise, or maintain normal weight, and whose sleep was disturbed, and among those who died in the first years of the follow-up period.

In fact, the data do not support that hypothesis. Among men, an even steeper mortality gradient prevailed among those with no health problems and those with symptoms only, than among persons who reported some chronic conditions and disability of varying degrees. Also, during the period from 1965 to 1974, less than one-seventh of the male deaths occurred among the five percent who had any disability and a Health Practices Index of 0 - 3 in 1965. Finally, only a small minority of the deaths in that group occurred during the first year and a half of the follow-up, when seriously ill people would have been likely to die. Though there was a slight concentration during the early years, the deaths were distributed fairly evenly over all nine years. Thus the striking association between health practices and mortality cannot be explained by pre-existing disease resulting in the “poor health practices.”

Analysis of the data reveals, moreover, that the health practices score predicts mortality independently of socioeconomic status, race, and seven psychological factors examined. Finally, the Health Practices Index is related not only to total mortality, but strongly also to death rates from each of four major categories of disease: coronary heart disease, cerebrovascular and other circulatory disease, cancer, and all other diseases.

Social Networks

Several items in the questionnaire were used as a measure of the nature and extent of social connections in the form of marriage, contacts with close friends and relatives, church membership, and affiliation with non-church groups. The HPL mortality rates showed a gradient with each of the four components of the social network. For example, the age-adjusted mortality among unmarried men aged 30 to 69 years was 14.7 compared with 8.4 among married men. The corresponding rates among women were 7.6 and 5.8. Mortality among men with few close friends and relatives was 12.5, but only 7.4 among men with many close friends and relatives; corresponding rates among women were 11.2 and 4.6.

To investigate their cumulative relationship to mortality, the four types of social connections were used to construct a Social Network Index. The latter divided the study population into four groups: I (fewest connections), II, III, and IV (most connections).

This Social Network Index showed a gradient with mortality: group I had the highest death rate and group IV the lowest. The mortality gradient with the Social Network Index was just about as striking as with the Health Practices Index. Men constituting the most isolated group had an age-adjusted mortality rate 2.3 times higher than men with the strongest social connections; among women the difference was 2.8.

Because a person’s social network is obviously related to that individual’s position in the social structure, we examined the social class, race, level of urbanization, geographic mobility, and occupational mobility as possibly confounding variables. All of these had been shown by other investigators to be associated both with social networks and with health. Analysis was therefore directed toward ascertaining the relationship between each of the sociostructural elements (social class and others) and between social networks; and assessing whether the Social Network
Index predicted mortality independently of the other social factors.

Many studies show an association between socioeconomic status, and health data from the HPL confirm that association. The latter also reveal, however, that throughout the socioeconomic spectrum men and women with few social contacts had higher mortality rates than those with many connections. This finding supports the conclusion that the Social Network Index predicts mortality independently of socioeconomic status. Analysis also indicated that the relationship between social isolation and mortality risk could not be attributed to race, geographic mobility, occupational mobility, or level of urbanization so far as these could be measured from the questionnaires. The social network gradient in mortality likewise persisted through the varying levels of preventive health care.

It is often suggested that psychological states may either mediate the relationship between social networks and mortality or affect the people’s network directly. According to the first hypothesis, people without social ties become lonely, depressed, or otherwise psychologically disturbed and some such state induces disease. According to the second hypothesis, people who are psychologically disturbed find it difficult to maintain social ties.

Thus, the findings indicate that the extent to which people maintain social connections is strongly associated with risk of mortality. The relationship holds independently of age, physical health status at baseline, position in social structure including socioeconomic status, level of preventive health care and the seven psychological factors that were examined.

In order to explore these issues, the psychological characteristics ascertained in the 1965 survey were analyzed. Seven of these factors, including personal uncertainty, anomic, and life satisfaction were selected. Of them, the one termed life satisfaction proved to be most significant for predicting mortality, the relative risk being almost 2 for men and 3 for women. Nevertheless, the Social Network Index was associated with mortality independently of life satisfaction, as well as the other six psychological factors examined.

Thus, the findings indicate that the extent to which people maintain social connections is strongly associated with risk of mortality. The relationship holds independently of age, physical health status at baseline, position in social structure including socioeconomic status, level of preventive health care and the seven psychological factors that were examined.

The association between health practices, social networks, and mortality is clear. And it appears to be independent of possibly confounding factors such as age, sex, race, physical health status at baseline, preventive health care, and socioeconomic status when these factors are considered one at a time. The possibility that, cumulatively, these factors might account for the association was also examined, using multiple logistic analysis. The latter method confirmed the independence of the associations between mortality and the health practices and social networks. When considering all potential confounders (including both social networks and health practices) simultaneously in the logistic analysis, the approximate relative mortality risk for those with many high-risk health practices was 2.4 for men and 2.2 for women. For those with least social contacts, the risks were 2.2 and 2.4 for men and women, respectively.

Both sets of factors were also found to be associated in the expected direction, with changes in health status occurring between 1965 and 1974. As anticipated, physical health status for the sample population as a whole declined over the nine-year period, consistent with aging of the population. The decline was significantly greater, however, among those who were following high-risk health practices, had weak social networks in 1965, or both; correspondingly, the decline was significantly less among persons with low-risk health practices and strong social networks. These associations are independent not only of each other, but also of socioeconomic status.

In summary, the data substantiate early findings of the HPL that health is associated with certain common habits called health practices, and with social networks. The associations are strong and prevail not only with regard to health status as originally determined in the 1965 survey, but also through nine years of mortality experience, and through decline of physical health status over the same time period. Persons with high-risk health practices and weak social networks die off more rapidly and their physical health deteriorates faster. The associations of these two sets of ways of living persist in all four major categories of causes of death, as well as in mortality as a whole. They are independent of — that is, cannot be “explained by” age, sex, socioeconomic status, baseline physical health, and other potentially confounding factors examined.

These findings raise many issues that cannot be directly answered by further analyses of these data. Some of the questions have to do with social networks: How are social networks related to health status? What is it about social isolation that carries health consequences? What are the biologic mechanisms that lead from social disconnection to disease and death? Other similar questions concern the relationships between health habits and morbidity and mortality, though we
are closer to understanding how certain physical aspects of living, such as exposure to cigarette smoke, affect health.

What can be clearly perceived is the historical relationship between ways of living and the patterns of health, disease, and mortality. During the early stages of industrialization, the conditions of life among the increasing numbers of people who were being drawn into factory work obviously affected health and mortality. Major determinants were the physical conditions of life such as grossly poor sanitation, polluted water, crowding, and impaired access to food. Later stages of industrialization have brought relative affluence to masses of people. This relative affluence has made rich food, cigarettes, and alcohol widely available and attractive; it has also reduced the physical demands of life. In addition, advanced industrial civilization, especially in the United States, has profoundly changed family patterns and other social relationships.

forms of noninfectious respiratory disease. About midway through the twentieth century when this changed pattern was recognized, it seemed to many that cancer and cardiovascular disease were occurring as a "natural" concomitant of aging. Now it is becoming evident that ways of living still determine the disease picture, that premature deaths in our type of society generally reflect, among other things, cigarette smoking, excessive consumption of alcohol, and other common habits termed health practices in this work; and by what are here termed weak social networks. A perspective in which chronic diseases are not viewed as an inevitable part of the aging process invites efforts to extend both the life span and years of life free from disability. Such a view now seems justifiable; in fact, evidence is mounting that many of the physiological changes we commonly think of as part of the "natural aging process" are to a large degree environmentally determined.

The significance of this work comes from the idea that health and disease arise mainly from circumstances of living. Within rather well-defined biologic limits, the health, disease, and mortality pattern of any community generally reflects the conditions of life within that community.

It now appears that these alterations in ways of living may be fundamentally responsible for the contrasting patterns of disease in the two periods. In the latter part of the nineteenth and early twentieth centuries, tuberculosis and other respiratory infections, as well as typhoid and other intestinal infections, dominated the scene. In the latter part of the twentieth century, their place has been taken by coronary and other cardiovascular diseases, lung cancer, and other
COMPUTERS IN MEDICINE

Last year, over 1.4 million computers were sold worldwide; a million of them in the United States alone. Sales may more than quadruple this year, leaving little doubt that by the turn of the century, computers will be as common in American homes as television sets are today. In the meantime, they have become so commonplace in industry, business and education, that it is difficult to imagine the world before computers.

Computer Unit is Installed at the School of Medicine

A Biomedical Computing Unit has been installed on the third floor of the Sterling Hall of Medicine to meet some of the special needs of the Medical Center community. Its primary function is to provide scientific investigators with collaboration at a sufficiently high academic level to contribute to the design and implementation of research projects using computers, according to Dr. David Stagg, the director.

The three-room unit includes a 32-bit virtual memory machine which can support a wide variety of hardware and software options. It can be used via terminals located in a separate area within the unit, or via telephone. The terminal room also houses a graphics terminal with a hard copy option and a digital XY plotter. A small single-user computer is also available as is compatibility with other computer units.

The Unit's staff are trained in biomedical research as well as computer science. Their collaborations are primarily in the basic sciences, particularly neuroscience, and research involving image processing techniques. They are also becoming increasingly involved in clinical research and projects involving data management.

This fall, the Office of Graduate and Continuing Education held a seminar for members of the Medical Center community to demonstrate the varied uses of computers currently being applied in basic science investigation and clinical research here. They include a video game for patient education in management of childhood asthma: expert consultation systems; image development and enhancement; and patient care information systems. Examples of computer application to clinical medicine, to basic medical research, and to diagnostic imaging follow.

Expert Computers in Clinical Medicine

Dr. Perry L. Miller, assistant professor of anesthesiology, is developing “expert” computer systems in several areas of medicine, using Artificial Intelligence (AI) techniques to critique a physician’s plan. Artificial Intelligence is the science of designing complete computer systems to behave, respond or perform tasks in ways which appear to exhibit intelligence. AI techniques have been applied to many problems including playing games such as chess, “understanding” written or spoken language, recognizing objects in a visual scene, and performing medical diagnosis.

A recent direction in AI research has been the development of “expert systems” — problem solving computer systems which contain knowledge about a practical, real-world domain, such as medicine, computer system design, or geologic analysis. The system’s knowledge is usually gathered from one or more human experts with the goal of developing a system which can make expert-level judgements and recommendations. Over the past decade, a number of expert systems have been developed in medicine; most, however, are still in the research stage.

Previously developed expert systems in medicine have taken the approach of simulating a physician’s decision-making process. They gather information as a physician would, and then try to arrive at similar conclusions. When applied to medical management, such systems have the clinical effect of trying to tell a physician what to do.

Dr. Miller’s systems are different. Instead of trying to tell a physician how to practice medicine, the system first asks how he or she proposes to manage the patient. It then critiques the proposed plan, discussing the risks and benefits of that plan as opposed to alternatives which might be reasonable or preferred. As a result, a critiquing system tells the physician, “This is what I think of your management plan”, whereas the traditional computer-advisor says, “This is how I think you should manage your patient.”

There are several potential clinical advantages to the critiquing approach. It accommodates the inherent variation of medical practice. It leaves the primary responsibility for formulating patient management with the physicians, and allows the computer to play a secondary role, providing feedback to help evaluate and optimize their approach. It casts the computer in the role of an ally, rather than a potential competitor.

Dr. Miller is applying the technique in several types of medical management, one of which is described here, along with excerpts from their output, illustrating the critiquing nature of their advice.

HT-ATTENDING system for essential hypertension

HT-ATTENDING is designed to critique the pharmacologic management of essential hypertension, and is being developed in collaboration with Dr. Henry R. Black, director of the Hypertension Clinic and associate professor of medicine. In treating a hypertensive patient with gout, a physician has proposed initiating antihypertensive treatment with hydrochlorothiazide
50 mg bid, a commonly used initial program. The computer replied, *In the United States, diuretics are recommended by most authorities as initial or step one therapy. Since the initiation of diuretic therapy may precipitate a gouty attack, you may wish to start prophylactic treatment when beginning a diuretic in a patient with gout.*

A thiazide diuretic or similar acting agent is the drug of choice for most patients. Hydrochlorothiazide is a commonly used thiazide diuretic. Chlorothalidone or metolazone are alternative agents worth considering since they are long-acting and can be given once a day. *We usually start treatment with a lower dose than the dose you proposed. We now recommend treatment with hydrochlorothiazide 25 mg qd or bid. Recent work by Materson* has shown that low doses or diuretics may be as effective as higher doses yet cause less hypokemia. The reference to Materson is available on-line. After the system’s critique, the physician may ask to see any such references and may also ask for additional information about the various issues discussed.

In treating hypertension, a physician usually starts with one agent, and periodically either increases dosages or adds further agents until blood pressure is controlled. There is a bewildering, changing array of drugs available, each with risks and benefits. As a result, there is great latitude for practice variation. At the same time, it is extremely difficult for a practicing physician to keep current with all the various possible options. The critiquing approach gives physicians feedback as to how their approach fits in with current thinking in the field and the current spectrum of agents available.

**The application of microcomputers in research**

The use of computers in research laboratories is a phenomenon which has grown with the rise of the computer industry itself. Until the end of the 1970s, medium-sized computers dominated the laboratory environment, providing for the first time a computer system which was fast, had large storage capacity, and was, in comparison to its forerunners, relatively inexpensive. Over the last four years, this domination has been changing. Microcomputer systems are now finding their way into the laboratory. Initially reserved for word processing and simple mathematical applications, microcomputers, whose speed and functional capabilities have been increasing as rapidly as their price has been falling, are now serious contenders for the data acquisition, display and analysis tasks of many research laboratories.

Microcomputers are being used in every area of laboratory experimentation, ranging from their inclusion in complex equipment, where they are enhancing functionality and ease of use, to complete control of entire experiments. Ideally suited to handling both simple repetitive tasks as well as simplifying complex ones, they are helping to speed up the often long process of analysis and interpretation of experimental results. Their inherent flexibility allows them to be easily adapted to a wide variety of different situations within the laboratory.

For instance, Dr. Brenda Ritchie’s laboratory in the John B. Pierce Foundation Laboratory is investigating problems of human neuromuscular fatigue and in quantifying relationships between physiological variables such as force, EMG, and the electrical activity associated with single unit motoneurons. With Dr. Simon Smith, associate research scientist with the Biochemical Computing Unit, they have developed a computer system based on a popular microprocessor which has many of the features formerly seen in much larger systems, but for considerably reduced cost.

This laboratory computer system actually contains four separate microprocessors, each performing a dedicated task. One acts as the “master” system, and the other three are used to speed up the processing required to handle special features.

To compliment this hardware, several software packages have been developed. This integrated software allows for data acquisition from the experimental setup or from an FM tape recorder to the storage device; preliminary data review and analysis using the graphics display; and secondary data analysis — or comparisons between different experiments.

This system is being used in the determination of the relationships between fatigue, motoneurone activity, and voluntary force generation in a variety of human muscles, and is shedding new light on the role of motoneuron activity in the generation of muscle force.

The more recent and highly successful introduction of second generation microcomputer systems will help to further the development of less expensive, more powerful and highly functional laboratory computer systems. The role of the microcomputer in modern research can only continue to increase in the future.

**Computers in medical imaging**

Digital computers have wide application in medical imaging, according to Dr. John Gore, associate professor of diagnostic radiology and director of NMR imaging at Yale. An image is a recording of some signal from different parts of an object which contains features that convey information to an observer. The “signal” may, for example, be the x-ray intensity transmitted through the body, while the “features” could be the shadows cast by bones and organs in the body. Such images occur in several different guises in medicine, but one of the most important areas that directly affects patient care is diagnostic imaging, which includes conventional radiography, ultrasound, nuclear medicine, computed tomography, and now, nuclear magnetic resonance (NMR) imaging. Digital computers are used extensively to create, display, and
manipulate or process images, particularly in tomography and NMR imaging where usually the entire imaging system is centered around a computer.

NMR imaging has developed in the last decade as a powerful addition to the range of methods available for creating images of the inside of the body. It uses the properties of some atomic nuclei, notably the hydrogen nucleus contained mainly in water and fat to absorb and re-emit energy in characteristic amounts when placed in a magnetic field. A radiofrequency transmitter is first used to disturb the nuclei in atoms, and a tuned coil connected to a sensitive radio receiver is used to detect the response of the body nuclei as they recover and emit a weak signal. Coils which produce magnetic field gradients are driven by powerful audio amplifiers to add further information about where the signals come from. An NMR scanner, therefore, comprises several complex electronic modules, but the heart and brain of the system is a computer, which manages and coordinates the various subunits, records and analyses the signal information, and displays the resultant image.

For example, the computer communicates through a special interface to the radio frequency transmitter to define the complex electrical waveforms that are fed to the transmitter coil used to excite the nuclei. The precise shapes and magnitudes of these excitations are defined in software, and they are stored in computer memory as arrays of numbers. Similarly, when the appropriate NMR radio signal is induced in the receiver coil, it is converted to digital form and the numerical samples are stored in memory for processing. In NMR, the nature of the image information is strongly dependent on the shapes and timings of the various pulse sequences used to procure a signal, and these are controllable in a very flexible way by computer software. The computer therefore controls all aspects of data collection, and a crucial role is played by the interface between the digital and analogue worlds.

Once data is acquired into memory, several numerical computations usually take place. For example, in NMR the signal may require filtering to remove unwanted interference, smoothing to remove sharp spikes, interpolation between samples and then Fourier transformation. The latter is a complex mathematical manipulation that can only practically be performed by computer, and which is often the reason for including an array processor that performs such calculations very rapidly in the computing system.

In both CT and NMR, many different signals are accumulated and then recombined to form an image, and this image reconstruction is always performed by computer. The image produced exists in computer memory as a large two- (or three-) dimensional array of numbers (typically 256 X 256) that correspond to the measured image quantity from specific small volume elements (voxels) of the object. This quantity may be the x-ray absorption (in x-ray CT scanning), the hydrogen nucleus NMR properties, the activity of a radio nuclide, and so on. The array of numbers in memory is used to control the intensity of a video display so that the stored number value corresponds to the image brightness in one picture element (pixel).

Many types of further image processing may occur after the image is obtained. For example, whole images may be added to improve the quality. One particularly important type of such arithmetic is subtraction. Two images taken at different times may be subtracted to reveal only those regions that have changed. If, in the interim, a contrast agent is introduced, the agent alone will be visualized in the difference image. Such subtraction methods are now widely used for x-ray angiographic studies to observe blood vessels and flow. A wide variety of techniques have been developed to improve image quality, and these are readily implemented using fast computer processing. Smoothing may be performed to reduce the mottle of an image, and thereby improve the detection of low contrast objects, while edge enhancement may be implemented to improve the ability to resolve fine details and increase sharpness.

Computers may also be used to extract quantitative information from images, which cannot be done by the human visual system alone. These may be simple statistical quantities, such as the mean and variance over a region of interest. Where the spatial pattern of pixel values conveys information about the nature of the object, texture analysis may be useful to discriminate tissues, e.g. for analyzing ultrasonic speckle patterns. Edge detection and boundary mapping may be automated to allow accurate planimetry or volume estimations to be made such as in calculating heart chamber volumes. The computer-generated result may be less prone to illusion and artefact and more reproducible than that produced by a human observer.

There is currently much research in digital image processing, manipulation and algorithm development, and ideas and techniques may cross fertilize from one area of imaging, such as satellite reconnaissance, to another — such as in vivo medical diagnostic imaging. The medical community can expect to see a greatly increased involvement of digital computers in all types of medical imaging.

Material for this article was provided by Drs. Stagg, Miller, Smith and Gore.
A LOOK AT MEDICAL EDUCATION TODAY
— a case for the “Yale System”

The Association of American Medical Colleges (AAMC) is undertaking a Project on the General Professional Education of the Physician and College Preparation for Medicine. During the first six months of 1983, the Project Panel held four regional meetings at which representatives from medical schools, undergraduate colleges, and various professional organizations were invited to report. The following statement was presented at the Northeastern Regional hearing in May by Dr. Fred S. Wright on behalf of the Yale School of Medicine. Dr. Wright, professor of medicine and physiology, is chairman of the School’s Curriculum Committee.

My aim will be to provide testimony in line with the goals of the AAMC Project: to tell about our approach to medical education, about our course of instruction, and about the philosophy on which it is based.

Among curriculum types, the outline of courses at Yale would probably be viewed as traditional. The four-year program is divided into preclinical and clinical phases. The division is not absolute, but in general outline, the first three semesters are devoted to preclinical science courses and the third year is occupied by clinical clerkship rotations. Between these segments, an integrated program in the fourth semester provides an Introduction to Clinical Medicine. In this semester, students are offered, for the first time, formal instruction in clinical assessment, diagnostic procedures, and pathophysiology. Thus, during much of the first two years, teaching is in a classroom situation. The formal work in nearly all of these courses is approached by a combination of lectures and small group discussions (or in a few cases, laboratory sessions) that meet regularly during the course.

This general plan has guided course scheduling with only minor modifications for the past ten years. At the end of the 1960's, Yale experimented with a “new curriculum” that introduced in the first semester, clinical concerns such as history taking and physical examination, and provided at the end of the first year, an apprentice-like experience with a preceptor, usually in community practice. Overall, this program was intended to integrate basic science and clinical medicine by presenting both throughout all of the four years. Within a few years, however, it became clear that this intention was not being realized. In particular it was evident to many that the effort to enrich the program of the last two years with further courses in the basic sciences was not succeeding.

Having characterized Yale’s present curriculum as being nearly classical in its resemblance to the formula standardized early in this century, I must go on to say that the milieu in which this general structure exists very likely differs from that in many other schools. Despite periodic revisions of the schedule of courses, the general policy governing implementation of the schedule (referred to in New Haven as “the Yale System”) has somehow persisted with little change since it was adopted more than 50 years ago:

1. Primary responsibility for setting priorities and for successfully completing their medical studies is vested with students.
2. Advancement of individual students proceeds at a rate best for each student.
3. A thesis is required of all students.
4. Examinations are not required during or at the conclusion of individual courses.
5. Proficiency in pre-clinical subjects is demonstrated by successfully passing a comprehensive examination. Originally, this examination was a one-week session of written and oral exercises offered twice a year; since the 1940’s, the requirement has been met by passing the National Board Exam Part I.

Naturally, this rather idealistic approach, which attempts to reduce competition in a competitive world, is not without problems. It is not best for all students; some would probably accomplish more in a more rigidly structured program. Since attendance at classes is not required, sometimes students and teachers do not meet and this is not helpful. Faculty morale suffers when students do not appear. In the present era, however, these difficulties are not dominant and the general level of participation and involvement on the part of both students and faculty is high. Teaching in this voluntary and non-punitive environment is a pleasure. The importance of this approach, and its benefits, struck me when I read David Roger’s description, published in The Pharos last spring, of a visit with medical students. He described “an outpouring of frustration, disappointment, and real rage.” The students “felt they were being lectured to death.” They complained of insufficient time for study and of “dreary never-ending series of quizzes, tests, and other bracings.”

We think that some of these difficulties have been avoided at our school because of the basic policy I referred to as the Yale system. In view of the apparent viability of this 50-year-old experiment, we hope the committee will recognize and affirm the advantages of having each school set its own standards and course of study. It would be a great service if the committee report restated the important difference between individual academic programs leading to a degree, and the
process of certification qualifying graduates to practice medicine. Certification ought to remain exclusively with licensing boards. They should set their own standards of competence for the practice of medicine in their jurisdictions. Schools should develop their own curricula and thus be able to innovate and to respond to their own particular strengths. As this committee reviews medical education throughout the country, we think it is important to preserve the possibility of individual innovations and approaches and to avoid setting particular guidelines that could well serve as ammunition for particular interest groups who might want one specific course or another to be taught in all schools. The curriculum should not be a political issue open to coercion by such interest groups.

The features of medical education at Yale that I have described briefly, the traditional course structure, and the unusual (although now long-standing) approach to requirements, are really technical matters. What it is that we are trying to teach, and that this structure is supposed to enable students to learn, remains the focus of our continuing concern. We are engaged in a continuing struggle to provide general education for future physicians. One reason that this is a struggle is the increasing specialization of both medical practice and our own faculty. Both faculty and students tend to deal in subspecialty interests, at the cost of missing opportunities to involve themselves in a broad range of more generally useful information. We are attempting to develop and maintain a program that treats the medical school years as preparation for further postgraduate training, not as preparation sufficient for medical practice. We believe, therefore, that two elements are essential: a secure grounding in the sciences relevant to medical practice; and clinical activities that develop habits of mind and behavior that will outlast particular currently popular techniques of diagnosis and treatment.

This does not mean that we demean or ignore the facet of this project concerned with "qualities, values and attitudes." We must be equally concerned with the ability of doctors to respond to patients' needs in a compassionate and understanding manner. The admissions committee must recruit students who possess, and the medical school program must foster continuing development of those qualities necessary in the wise and caring physician. But we think it is very important to recognize that concern for humane and compassionate medical care is not alternative to dedication to scientific knowledge or clinical acumen. We are very concerned that our program of instruction in basic science remain strong. After describing his worries about medical education, David Rogers went on to state the two major objectives of medical school: to inculcate personal habits of learning (to make the physician a continuing learner throughout his or her lifetime); and to lay down an appropriate scientific base, to understand facts, think deductively and gain experience in logical decision making. He seems to be saying that medical education in the basic sciences should not be viewed as a hurdle to get over, or as a burden to bear, or as a destructive dehumanizing ordeal, but rather that the information and the intellectual activity involved in dealing with it are a crucial element in forming habits of mind that will serve physicians in their future continuing education.

I was also struck in reading Paul Starr's new book, The Social Transformation of American Medicine, by the pervasive references to the importance of science to the development of present day medicine. Starr argues that medicine's link to modern science is one of the important factors underlying its very legitimacy. To choose one such statement from this book:

"Modern medicine is one of those extraordinary works of reason: an elaborate system of specialized knowledge, technical procedures, and rules of behavior. By no means are these all purely rational: our conceptions of disease and responses to it unquestionably show the imprint of our particular culture, especially its individualist and activist therapeutic mentality. Yet, whatever its biases and probably because of them, modern science has succeeded in liberating humanity from much of the burden of disease. Few cultural relativists, suffering from a bad fever or a broken arm, would go so far to prove a point as to trade a modern physician for a traditional healer. They recognize, in behavior if not always in argument, that in medicine the dream of reason has partially come true."

There is a need for balance in the curriculum, for vigilance to be sure that courses dealing with science and courses concerned with patient care both provide effective general education. However, we do not believe that blame for whatever may be amiss today in medical education should be laid at the door of basic science. I think we all realize that effective medicine in the future will be based in part on the pre-clinical sciences we call "basic" and to a fearful extent on science that we do not yet know but must be prepared to understand and apply. At Yale we are looking for ways to get more general education, including science, into the curriculum.

Medical education should equip the student with a scientific approach to medical problems, the skills necessary to obtain clinical information, and the ability to respond in a compassionate manner to the problems of patients. Medical education should emphasize problem solving that is independent of a large instantly recalled database. Increasingly, the ability to master all of the information necessary to practice medicine will become a more distant and unachievable goal and the use of information retrieval systems will become increasingly common. Therefore, it is important for the medical student and the future physician to be able to acquire necessary information from available sources, to learn to use this information to solve clinical problems, and to do this while retaining and developing the capacity to offer understanding and sympathy to fellow humans when they sorely need it.
The Veterans Administration has appointed Dr. Philip K. Bondy chief of staff at the Medical Center in West Haven. Dr. Bondy, who is professor of medicine, and is well known as an outstanding teacher and endocrinologist, has also been appointed associate dean for the V.A. Medical Center.

A graduate of Columbia College and Harvard Medical School, Dr. Bondy first came to Yale in 1948 as Alexander Browne Coxe Fellow in Physiological Chemistry. He became a member of the School of Medicine faculty in 1952, when he was appointed assistant professor of medicine. In 1965, he was named Ensign Professor of Medicine, and the following year, he was appointed C.N.H. Long Professor and chairman of the Department of Internal Medicine. He left Yale in 1972 to become Cancer Research Campaign Visiting Professor of Medicine at the Institute of Cancer Research, and consultant in medicine at the Ludwig Institute of Cancer Research in London; appointments he held until 1977, when he returned to Yale as professor of medicine, and as associate chief of staff for research at the V.A. Medical Center.

Editor-in-chief of the Yale Journal of Biology and Medicine, Dr. Bondy is also editor of the Metabolism Section of the Year Book of Medicine and serves on the editorial boards of Cancer Topics and Merck Manual. Elected to Phi Beta Kappa, Sigma Xi and Alpha Omega Alpha honor societies, he is a fellow of the American College of Physicians, the American Association for the Advancement of Science, and the Royal College of Physicians, and a member of a number of professional societies including the American Society for Clinical Investigation, Association of American Physicians, the American Federation for Clinical Research, and the Association of Physicians of Great Britain and Ireland.

Dr. Peter I. Jatlow, an authority on the clinical toxicology and pharmacology of psychotropic drugs, has been appointed chairman of the Department of Laboratory Medicine at Yale, and director of clinical laboratories at Yale-New Haven Hospital. He succeeds Dr. David Seligson, professor of laboratory medicine, who has held these offices since 1972.

Dr. Jatlow, who is professor of laboratory medicine and psychiatry, is well known for his extensive clinical studies of the effects of cocaine and antidepressant drugs as well as drugs used in the treatment of children with attention deficit disorders. He was the first to successfully measure the level of cocaine in the blood of individuals taking the drug by various routes.

A graduate of Union College, Schenectady, he received his M.D. degree from the State University of New York, Downstate, and came to Yale in 1962 as an intern in pathology at Yale-New Haven Hospital. He was appointed to the School of Medicine faculty as an instructor in pathology in 1964, and was promoted to assistant professor four years later. In 1975, he was named director of clinical chemistry in Yale-New Haven Hospital, and the following year, was appointed professor of laboratory medicine. He received a joint appointment as professor of psychiatry in 1978.

Dr. Jatlow serves on the editorial boards of several professional journals including Chemical Chemistry, Journal of Analytic Toxicology, Therapeutic Drug Monitoring, and Clinica Chemic Acta. He is president of the Academy of Clinical Laboratory Physicians and Scientists and is a member of numerous other national advisory committees including the National Institute on Drug Abuse and the American Board of Pathology Chemical Pathology Test Committee.
The John B. Pierce Foundation Laboratory celebrated its 50th anniversary on November 4th, and paid tribute to Dr. A. Pharo Gagge, fellow emeritus. Dr. Gagge has been a member of the Laboratory's scientific staff since it was founded in 1933 to conduct research and educational programs "for the increase of knowledge to the end that the general hygiene and comfort of human beings and their habitation may be advanced."

Dr. C.E.-A. Winslow was appointed the first director of the Laboratory while he was chairman of the Yale Department of Public Health, and he retained both offices until his retirement in 1945. Under his leadership, and that of subsequent directors, the Laboratory has gained worldwide recognition for its many significant contributions to the field of environmental physiology. In recent years of energy shortages and increasing pollution production, their work has assumed added importance as governments seek a balance between energy conservation and a healthful environment.

The close relationship between the Pierce Laboratory and the Department of Epidemiology and Public Health has continued. A major portion of Yale's program in environmental health is conducted in the Pierce Laboratory, and in 1968, qualified graduate students and postdoctoral fellows were admitted as majors in environmental physiology in the Department of Epidemiology and Public Health.

Dr. Gagge, who is also professor emeritus of epidemiology, is well known in the scientific world for his contributions to the field of thermophysiology. In the 1930's, he and his colleagues developed the use of partial calorimetry, a widely applied method of measuring absorbed or evolved heat, which is less complicated than the use of a full calorimeter. In addition, his research led to the development of the ET*Scale, a biophysical index combining the physical properties of the skin surface, to give a single temperature index of the environment. Based on a concept similar to the weather reporter's familiar THI (Temperature Humidity Index), ET* is a more scientific and accurate assessment of the effect of the environment on human comfort. More recently, Dr. Gagge designed a method for direct measurement of thermal insulation of all types of clothing as they are worn during heavy exercise as well as during rest. His research is of importance to scientific programs, including those of NASA, involved with the effects of the environment on human health.

Dr. Jan A. Stolwijk, chairman of the Department of Epidemiology and Public Health and associate director of the Laboratory, was chairman of the anniversary program. Historical events of the institution recounted by Dr. Vernon Lippard, dean emeritus of the School of Medicine, and members of the Laboratory were followed by the reading of tributes to Dr. Gagge from colleagues and friends around the world.

CMHC RESEARCH CENTER NAMED IN HONOR OF SENATOR RIBICOFF

On September 28, the research facilities of the Connecticut Mental Health Center were dedicated as the Abraham Ribicoff Research Facilities, in honor of the former Governor of Connecticut. President A. Bartlett Giamatti was joined by Governor William A. O'Neill and Dr. Herbert Pardes, director of the National Institute of Mental Health in a tribute to Senator Ribicoff and his long support of mental health programs as governor, Secretary of Health, Education and Welfare, and U.S. Senator.

During his terms as governor, Senator Ribicoff was a strong proponent of the Connecticut Mental Health Center, which was established in 1966 as a cooperative endeavor of the State of Connecticut Department of Mental Health and Yale University. Research conducted at the Center is recognized internationally for its many contributions to basic and clinical studies of mental disorders.

PHYSICIAN ASSOCIATES HOLD TWELFTH COMMENCEMENT

On August 22, twenty-one students received Certificates Of Physician Associate in a ceremony in the Mary S. Harkness Auditorium. They were the twelfth class to graduate from the program established in the School of Medicine in 1973 under a grant from the National Institutes of Health.

Elaine E. Grant, executive director of the Program, and Dr. Howard Levin, dean of students and medical director of the Program, officiated during the commencement, which included an address by Dr. Lowell S. Levin, professor of public health. Gary Spinner, a student, presented the Didactic Instructor Award to Dr. David Coleman, a postdoctoral fellow in the Department of Internal Medicine, for his exemplary efforts in the education and training of physician associates.

Clinical Rotation Site Awards were presented to Danbury Hospital, Lawrence and Memorial Hospital, Norwalk Hospital, Surgical Associates of New Haven, Waterbury Hospital, Yale-New Haven Hospital, and the West Haven Veterans Administration Medical Center. Deputy Dean Arthur Ebbert, Jr., and Debbie Waldes, assistant director of the Program, awarded the certificates, following which the graduates and their families and friends celebrated at a reception in their honor in the adjoining courtyard.

The Yale Physician Associate Program is classified as Type A, offering extensive training in general medical theory and clinical practice. Graduates are capable of examining patients, taking a medical history, and assisting physicians in performing diagnostic and therapeutic procedures. They function under the supervision and responsibility of the physician, and under special circumstances, with defined rules, may perform without the immediate surveillance of the physician.

HOSPITAL DEDICATED TO FORMER DEAN

The Bayne-Jones Army Community Hospital located at Fort Polk, Louisiana was dedicated on August 12, 1983. The 169-bed hospital is named in honor of Brigadier General Stanhope Bayne-Jones, who joined the Yale faculty in 1932 as professor of bacteriology and who served as dean of the School of Medicine from 1935 to 1940. He was also master of Trumbull College from 1932 to 1938.

At the outbreak of World War II, Dr. Bayne-Jones resigned as dean in order to enter military service. He was called to active duty as a lieutenant colonel in 1942, and was soon promoted to the rank of colonel and in 1944, to brigadier general. When Dr. Bayne-Jones died in 1970 at the age of 82, he was buried with honors in Arlington National Cemetery.
THE ROYAL SOCIETY HONORS DR. DOUGLAS

Dr. William W. Douglas, professor of pharmacology, has been elected a fellow of the Royal Society. In honoring him, the British scientific society cited Dr. Douglas’ research on the physiology and pharmacology of endocrine, exocrine and other secretory cells, which has led to the recognition of the involvement of calcium in stimulus-secretion coupling. Chartered by King Charles II in 1663 as the “Royal Society of London for Improving Natural Knowledge”, the society is one of the oldest and most prestigious scientific academies in the world.

A native of Glasgow, Scotland, Dr. Douglas has been a member of the School of Medicine faculty since 1968. Following graduation from the University of Glasgow, he did postgraduate work in physiology at the University of Aberdeen before returning to the University of Glasgow, where he received his M.D. degree with honors in 1949. He served as a major in the Royal Army Medical Corps prior to appointment on the University of Glasgow, he did postgraduate work in physiology at the University of Aberdeen before returning to the University of Glasgow, where he received his M.D. degree with honors in 1949. He served as a major in the Royal Army Medical Corps prior to appointment on the Medical Research Council at the National Institute for Medical Research in London.

Dr. Douglas first came to the United States during a leave of absence in 1952, when he was appointed an associate professor of pharmacology at the Albert Einstein College of Medicine. He was appointed professor of pharmacology in 1958. In addition to election to the Royal Society, Dr. Douglas has been honored with the John Gaddum Memorial Award from the British Pharmacological Society and the H.B. Van Dyke Memorial Award from Columbia University.

DR. LEVY IS HONORED

Colleagues and friends gathered at the West Haven Veterans Administration Medical Center on November 4th for a symposium in honor of Dr. Lewis Levy, clinical professor of neurology. A member of the School of Medicine faculty since 1954, Dr. Levy was chief of Neurology Service at the V.A. Medical Center from 1955 to 1976, and chief of the Cerebrovascular Section from 1979 to 1983. He was director of the Stroke Acute Care Unit from 1971 to 1976.

Guests were welcomed to the symposium by Dr. Richard H. Mattson, who succeeded Dr. Levy as chief of the Neurology Service, and Dr. Philip K. Bondy, chief of staff and associate dean, introduced the speakers. Dr. Gilbert H. Glaser, chairman of the Department of Neurology, moderated the morning session, while the afternoon session was led by Dr. Harold E. Booker, director of Neurology Service, V.A. Central Office.

During the day-long event, the Veterans Administration awarded Dr. Levy a special commendation which read in part, “During the three decades of his leadership, Neurology grew from a single staff member to a 61-bed independent service that is recognized as one of the outstanding units within the V.A. system . . . He initiated the development of a number of specialized units including the first Epilepsy Center and the Stroke Treatment Unit, that have served as prototypes for both the V.A. as well as for non-federal hospitals.

“Dr. Levy was instrumental in starting the neurology residency training at the Center which has been integrated with the program at the Yale School of Medicine. Over the years more than 60 resident physicians have trained under his expert guidance . . . Concurrently, (he has been extensively involved in both clinical and basic research, particularly in cerebral vascular disease. He has encouraged and fostered similar participation of his staff. Most importantly, his devotion to the human aspects of medical care has won him the respect and warm admiration of all who are fortunate enough to know him.”

A HEALTH GUIDE FOR GLOBAL TRAVELERS

A “Global Disease Guide” has been created and developed by Dr. Martin E. Gordon, associate clinical professor of medicine. This desk-top, record-sized informational disc permits instant finger-tip dialing of disease prevalence in 170 countries. The many voluminous and often obscure data references have been culled and brought together as a physicians’ world scanner to aid in post-travel diagnosis as well as an immediate guide to pre-travel immunizations. Color codes direct the physician to prevalence rates of viruses, helminths, protozoa, bacteria, rickettsia and even venemous bites and stings. The diverse types of arboviruses, dengue, schistosoma and the resistant malarial strains are readily spotted, heightening the physicians’ ability to recognize diseases that are no longer tropical or exotic in this jet age.

Dr. Gordon’s continuing interest in parasitology, the paucity of readily available references, and the need to increase physicians’ awareness of diseases of the traveler led him to develop the Global Disease Guide as an aid in disease prevention and post-travel diagnosis. National distribution of the Guides to medical schools, hospitals and physicians has just been initiated. Inquiries can be directed to Dr. Gordon at 111 Sherman Avenue, New Haven, Connecticut 06511.
THE CASE OF THREE MISSING HAMSTERS

Three infected hamsters reported missing from their cage in the animal containment facility on the ninth floor of the Laboratory of Epidemiology and Public Health became overnight celebrities — of a sort. "Infected Yale Hamsters Escape" was headline news for the wire services, major television and radio networks and newspapers across the nation, including the New York Times, which devoted almost half a page to the story.

The hamsters have not been found, and are presumed dead. Although their disappearance caused considerable stir in the media and concern in the University, the three rodents and others like them in the LEPH-9 facility are of little threat to human health and the likelihood that they escaped from the facility is practically nil. The incident, however, called attention to several potential areas which are vulnerable to error.

The hamsters were among several hundred research animals in a major study of Alzheimer's disease being conducted by Dr. Elias Manuelidis, professor of neuropathology and neurology. They were infected with Creutzfeld-Jacob virus, a so-called "slow virus", which is invariably fatal, and causes symptoms of senility similar to those of Alzheimer's disease. Because of its extremely low transmissibility in animals — only by injection into brain tissue — the C-J virus has been classified as Level 2 by the Center for Disease Control. Classification is according to risk level from Level 1, minimal risk, to Level 4, high risk.

Dr. Manuelidis and his colleagues had been working with C-J infected rodents for more than a decade in their laboratory in Brady Memorial Laboratory, but to further assure safety and security, the animals were moved last year to the recently completed Level 3 animal containment facility on the ninth floor of the Laboratory of Epidemiology and Public Health. Research procedures and equipment there were reviewed by leading experts from the National Institutes of Health and the Center for Disease Control, who found the facility met, and indeed, exceeded, all of the requirements for biological safety for this research. Safety precautions are supervised and enforced by the Division of Animal Care and by the Department of Biological Safety, University Health Services.

An associate in research for the C-J virus study first discovered that the hamsters were missing on October third. She later reported that the lid appeared to have been pushed off their cage, which was quite warped due to repeated autoclaving (high pressure steam for decontaminating infectious material). Health and safety officers, however, were unaware of the missing hamsters until a week later, when Robyn Gershon, acting director of the Department of Biological Safety, made a periodic, unannounced inspection.

A series of meetings has since been held to ascertain facts of the escape, and to plan remedial actions. Two problems addressed are the need for the establishment of a more definitive line of responsibility for maintenance of the containment facility, and a more accurate method for keeping a census of the animals. The high cost of maintaining the LEPH-9 animal containment facility is another factor. Cages have to be replaced repeatedly due to damage from autoclaving. The Division of Animal Care recently invested $14,000 on new cages reportedly more durable than ones previously used, and because of persistent problems, the autoclave itself will be replaced at an estimated cost of $125,000, according to Dr. Stephen Barthold, the acting director.

Although most are confident that their health and safety is not endangered, faculty, staff and students in the Laboratory of Epidemiology and Public Health have expressed concern over the incident. In discussing it with them, Dr. Edward Adelberg, deputy provost for the biomedical sciences, told them that the delay in notifying University officials about the missing hamsters was certainly an error, but he assured them that precautions will be taken to ensure that no "accidents of this nature will occur in the future." Dr. Jan Stolwijk, chairman of the Department of Epidemiology and Public Health was firm in agreeing that the problems must be remedied. "It would be difficult to maintain a viable working atmosphere if this sort of thing keeps happening," he said. — MBN

W.H.O. WORKSHOP ON TRYPANOSOMES HELD HERE

A workshop on African trypanosomes, sponsored by the World Health Organization, was held at the School of Medicine in November. Dr. Frank F. Richards, professor of medicine, was host to the three-day meeting of scientists from Africa, Europe and the United States.

African trypanosomes are the parasites responsible for trypanosomiasis (sleeping sickness) and N'gana, a disease affecting domestic livestock which has had severe implications for the economy of African nations. According to Dr. Richards, who is well-known for his research in tropical medicine, the incidence of sleeping sickness in Uganda and Sudan has risen sharply in recent years following war and unrest in those countries.

Drugs used for treatment of trypanosomiasis are effective in the early stages of the disease, but many of them have considerable toxicity and can be given only for short periods. In addition, they are of little use in regions where re-infection is an ever-present risk.

For these reasons, efforts to find a vaccine for trypanosomes have been accelerated in recent years. So far, the trypanosomes have outwitted the biologists studying the disease, according to Dr. Richards. "The disease is resilient, giving rise to many successive waves of fever and trypanosome parasitemia in the host. In each wave, the parasites are covered by a different protein overcoat — Variant Specific Glycoprotein (VSG). The host does make antibodies to one VSG and destroy the parasites. This destruction is, however, rapidly followed by the emergence of a second population of the parasites, carrying a different VSG," he explained.

The progeny of a single parasite has been shown to produce 100 or more different VSG surface proteins, and it seems likely that as many as 1000 different genes coding for the proteins are present.

In addition to Dr. Richards, participants from Yale included Dr. Curtis Patton, associate professor of epidemiology, Dr. Larry Ruben, postdoctoral fellow in epidemiology, and Dr. Thomas Lalor, postdoctoral fellow in medicine.
THE FIRST INTERNATIONAL SYMPOSIUM ON LYME DISEASE IS HELD AT YALE

"The Lyme disease story begins with two mothers in Lyme, Connecticut," Dr. Allen Steere said in introducing the First International Symposium on Lyme disease, held here on November 16-18. The mothers, skeptical of the diagnosis of juvenile rheumatoid arthritis in their children and several others in their neighborhood in 1974, called Dr. Andrew Spielman at the Section of Medicine and the Section of Rheumatology at the Yale Journal of Biology and Medicine. So the Yale Section of Rheumatology, who in turn conferred with the Yale Section of Rheumatology. Thus began an intensive investigation into the cause and treatment of a mysterious and serious new disease which ultimately would involve collaboration with scores of scientific investigators in the United States and Europe.

One of the mothers, Mrs. Polly Murray, and Dr. Spielman were among the more than 100 participants at the symposium, which was sponsored by the Yale Journal of Biology and Medicine and the Section of Rheumatology. The Journal will publish a limited edition of a book based on the symposium in mid-1984.

The theme of the symposium was established in the first session with a report of the clinical spectrum and treatment of Lyme disease by Dr. Steere, who is associate professor of medicine and principal investigator of the Lyme disease research at Yale. His report was followed by a history and comparison to Lyme disease of European erythema migrans disease disorders seen in Europe, by Dr. Klaus Weber, a dermatologist and allergist from Munich, West Germany. Dr. Stephen Malawista, professor of medicine and chief of the Section of Rheumatology, spoke on the implications of the Lyme disease study for research on other rheumatic diseases in a talk entitled "Lyme disease: a unique human model for an infectious etiology of rheumatic disease."

For the next two days, talks by leading investigators from throughout the United States, Germany and Scandinavia dealt with other related tick-borne disorders in Germany and Scandinavia; a description of Ixodes dammini, the tick vector of the disease; and an indepth study of the spirochete discovered last year to be the causative agent, and the host response to it. The final two sessions were devoted to epidemiologic studies of Lyme disease. Each talk was followed by lively discussion.

Top left, Dr. Steere with Mrs. Polly Murray and Wilson Nolen. Mr. Nolen was the major sponsor of the symposium.

Left, Dr. Willy Burgdorfer, Acting Chief, Epidemiology Branch of the National Institute of Allergy and Infectious Disease, center, first isolated the Lyme disease spirochete from Ixodes dammini ticks.

Below, Dr. Klaus Weber with Dr. Gustav J. Dammann, professor emeritus, Harvard School of Public Health, for whom the tick, Ixodes dammini, is named.

THE CLASS OF 1987

The 102 members of the Class of 1987 arrived on Cedar Street early in September looking slightly bewildered, but nevertheless ready to meet the challenges of the coming four years with the competence, humor and perseverance expected of students admitted to the Yale School of Medicine. The average age of the class is 23; and their cumulative GPA scores average 3.63; twenty of the 68 men and 34 women represent minority populations.

Almost a third of the students spent their undergraduate years in Ivy League colleges. Interestingly, more Harvard undergraduates applied (181) and were accepted (37), than Yale students (118 and 22), although 11 from Yale and 10 from Harvard actually matriculated. Sixteen of the first year class have advanced degrees, including five Ph.D. degrees.

Statistics aside, this class, as others before it, is impressive not only for the outstanding scholastic achievements of its members, but also for the wide diversity of academic backgrounds and extracurricular interests they represent. This is in keeping with an established trend in the School's admissions policy, according to Dr. Thomas Lentz, assistant dean for admissions.

Although the majority of students were science majors, there is variety even within their ranks, including those who concentrated in biology, engineering, chemistry, biochemistry, physics, or mathematics. Twenty-one members of the class majored in the humanities, while thirteen others studied social sciences. Not without honor students, the class includes a Fulbright scholar, as well as those who received All-American Academic Awards and magna cum laude, summa cum laude, and Phi Beta Kappa honors.

And there is talent — musicians who sing in choirs and glee clubs, and others who play the violin, cello, trumpet, guitar or flute in marching bands, symphony orchestras, and jazz and rock groups. Some are writers, including two published poets, a science writer and a medical editor; and members of the radio-television world, including a disc jockey, radio announcer, television producer and a director.
Every year in September, the Office of Student Affairs sponsors a picnic for first year students. Always a success, the picnic provides an opportunity for new students, faculty and administration to meet informally.

Some are dancers — modern, ballet and folk, while others have taken part in theatrical productions. Athletes in the class have participated in varsity track, swimming, soccer, tennis, crew and football — including two students who are former stars of Yale teams in more victorious times. Others play baseball, squash and volleyball just for the fun of it. And there is one magician among the ranks, whose skills, in the final analysis, may be the envy of all from time to time during the next four years.

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ACCREDITATION RENEWED
The Yale University School of Medicine was visited for three days in March 1983 by a survey team representing the Liaison Committee on Medical Education, which is jointly sponsored by the Association of American Medical Colleges and the American Medical Association Council on Medical Education. The purpose of the visit was to evaluate and accredit the program in medical education leading to the M.D. degree. As a result of this survey, the Liaison Committee on Medical Education voted to confer continuing full accreditation for ten years, the maximum length of time under the current rules.

STUDENTS PRESENT LECTURE SERIES ON NUCLEAR ARMS
The key to successful arms control talks lies in maintaining a continuity in the negotiations which thus far have been disrupted with each new presidential administration “trying to reinvent the wheel”, Paul Warnke told the large audience attending the final lecture in a series on the “Age of Nuclear Arms — a Medical Perspective.” Warnke, the director of the U.S. Arms Control and Disarmament Agency during the Carter Administration and chief negotiator for SALT talks in 1977-78, was received enthusiastically by the audience which overflowed Mary S. Harkness Auditorium.

The series of twelve weekly lectures sponsored by the Office of the Dean and the Department of Internal Medicine, was organized by students to present future physicians with an understanding of the consequences of nuclear war, as well as the political and historical forces that underlie the current standoff. The course did not espouse any particular solution to the problem.

“We believe this course embodies a progressive movement in Yale medical education — as future leaders of the medical profession, Yale medical students should be experts on issues that most threaten human health and well-being,” said Joshua Freedman, the second year student primarily responsible for organizing the series. “Further, because of their high standing in the public image, physicians are empowered to help form a consensus on how best to prevent nuclear Armageddon.”

Speakers included well-known leaders in the historical, technological, political and medical aspects of nuclear warfare. Gaddis Smith, Larned Professor of History, presented the first lecture, followed the next week by a highly informative two-hour talk on nuclear technology by Kosta Tsipis, co-director of the Program in Science and Technology at M.I.T. Dr. Jan Stolwijk, chairman of the Department of Epidemiology and Public Health; Dr. Robert Jay Lifton, professor of psychiatry; Dr. Richard Stahl, assistant professor of surgery, and Dr. Stuart Finch, a former member of the Yale faculty, who is now professor and chief of the Department of Medicine at Rutgers Medical School at Camden, were among the speakers. In addition to Mr. Warnke, the final lecture was to have included Eugene Rostow. The former director of the U.S. Arms Control Agency in the Reagan Administration was unable to participate due to illness.

Students Joshua Freedman, Laura Kuckes and Jeremy Holtzman are to be commended for the superb organization of this important lecture series and the recruitment of the outstanding speakers.
A crew from the School's Physical Plant installed the gift of Dr. Felix Marti-Ibanez in the Hope Building.

GIFT OF DR. FELIX MARTI-IBANEZ IS DISPLAYED

The impressive silk-screen of the title page of Andreas Vesalius' *De Humani Corporis Fabrica*, recently installed in the Hope Building, is part of a gift of books and manuscripts from the estate of the late Dr. Felix Marti-Ibanez, founder and publisher of *MD Magazine*. Published in 1543, the *Fabrica* is one of the most important medical works of the Renaissance, blending perfectly anatomical skill, artistic design, and format. The turbulent scene represents a public anatomy conducted by Vesalius, who is surrounded by students, members of the church, representatives of nobility, and rectors of the University and City of Padua. Vesalius dissects and demonstrates from the body, dispensing with the demonstrators seen quarreling among themselves under the table in the foreground. Other symbols and characters are depicted on the title page, which may be seen in its original edition in the Historical Library.

DISTINGUISHED MEDICAL HISTORIAN IS SIXTH JOHN F. FULTON FELLOW

Leonard G. Wilson, professor and head of the Department of History of Medicine at the University of Minnesota, and former editor of *The Journal of the History of Medicine and Allied Sciences*, was named the John F. Fulton Fellow in the History of Medicine for 1983. During his visit to Yale in November, Dr. Wilson delivered a series of lectures and met with students and faculty for informal discussions.

On November 4th, he delivered the Sixth Annual John F. Fulton Memorial Lecture entitled, "Internal Secretions in Disease; the Historical Relations of Clinical Medicine and Sciophysiology." The lecture, which was held in the Medical Historical Library, was sponsored by the Beaumont Medical Club.

The fellowship, named for the late Dr. Fulton, who was Sterling Professor of the History of Medicine and one of the founders of the Yale Medical Library, was endowed in 1978 by Dr. Bern Dibner, director of the Burndy Library, Norwalk, Connecticut. The Fellow is selected annually by a committee of the Beaumont Medical Club.

CUSHING ROTUNDA FEATURES THE "AMERICAN MEDICINE SHOW"

"The American Medicine Show", currently on view in the Cushing Rotunda of the Yale Medical Library, provides a history of this unique American institution, from its European roots through its heyday, to current research, to document the phenomenon.

The travelling patent medicine show pioneered the idea of sponsored entertainment in the United States and Canada by providing free concerts, vaudeville and Wild West shows as an inducement to buy Hamlin's Wizard Oil, Kickapoo Indian Sagwa, and a host of other cure-alls. The shows declined in the 1930's and 40's, but not before spawning such famous entertainers as Red Skelton.

Materials in the exhibition are lent from the collection of William H. Helfand, eminent collector and authority on the history of pharmaceutical advertising and senior vice president of Merck Sharp and Dohme International. The exhibit was prepared by Mr. Helfand and Brooks McNamara, professor of performance studies at New York University and author of *Step Right Up*, a history of American Medicine Shows. The exhibition was designed by Donald Vlack, curator of the Museum of Performing Arts, Lincoln Center. Catalogues of the exhibit are available, free of charge, in the Historical Library.

The exhibit coincided with the 250th meeting of the Beaumont Medical Club, held on January 20, when Mr. Helfand and Professor McNamara presented two lectures on the subject.
The National Kidney Foundation presented Dean Robert W. Berliner the 1983 David M. Hume Memorial Award. This award is the Foundation’s highest tribute to an individual in the field of nephrology. “Dr. Berliner has made a number of major contributions to the basic understanding of the kidney, including demonstration of potassium secretion by the renal tubule, the fundamental concept that illustrates the way in which the kidney handles potassium. His accomplishments and dedication have established him as a spokesman for the scientific community at large regarding health issues,” said Dr. David Ogden, president of the National Kidney Foundation in presenting the award to Dean Berliner at the Foundation’s annual meeting on December 3rd.

In October, Yale-New Haven Hospital became the sixth hospital in the United States to perform liver transplants, when Dr. M. Wayne Flye and a team of physicians and nurses performed the surgery on a six-year-old New Haven girl with life-threatening liver disease. Dr. Flye, who is associate professor of surgery, and the support team flew to Florida at 2:30 am to retrieve the liver from the body of a 20-month-old drowning victim, and completed the operation in New Haven by 11 am the same day. The liver began to function immediately and the little girl is making a satisfactory recovery.

The Board of Directors of the University of Puerto Rico has appointed Dr. Caleb Gonzalez visiting professor of ophthalmology; and in ceremonies held on November 18, he was honored as “Distinguished Alumnus” of the Inter-American University-Poly Alumni Association. In addition, Dr. Gonzalez, who is professor of ophthalmology and visual science, was selected as Special Guest at the annual convention of the Section of Ophthalmology of the Puerto Rico Medical Association.

Dr. John McL. Morris was recently named the Verstandig Distinguished Visiting Professor of Tennessee Center for the Health Sciences. Dr. Morris, who is John Slade Ely Professor of Obstetrics and Gynecology, is well-known in the fields of women’s health, birth control and gynecological cancer.

The Embryology section of Dr. Frank Netter’s new book, “Nervous System, Part I Anatomy and Physiology”, was prepared in collaboration with Dr. Edmund S. Crelin, professor of anatomy. The volume is a part of The Ciba Collection of Medical Illustrations.

Three members of the Department of Surgery have been elected to offices in professional organizations. The Society of Neurological Surgeons (Senior Society) appointed Dr. William Collins, Harvey and Kate Cushing Professor of Surgery (neurosurgery), president-elect. Dr. Irshad Chaudry, senior research scientist, was elected to the Executive Council of the Shock Society; and Dr. Wayne Southwick, professor of surgery (orthopedics), was recently appointed vice-president of the American Orthopaedic Association.

Dr. Charles M. Radding and Dr. Uta Francke attended the International Congress of Genetics held in New Delhi, India in December. Dr. Radding, who is professor of human genetics and molecular biophysics
and biochemistry, spoke on “The recombination mechanism of rec A protein.” Dr. Francke’s talk was on gene mapping on human and mouse chromosomes. She is associate professor of human genetics and pediatrics.

Dr. Sidney Blatt, professor of psychology and psychiatry, was elected a Distinguished Practitioner of the National Academies of Practice. Dr. Blatt was cited for his contributions to the study of depression and schizophrenia.

NEW BOOKS BY FACULTY


“Laboratory Medicine in Clinical Practice.” Edited by Harvey N. Mandell, M.D., associate clinical professor of medicine; and Margaret Johnson Bia, M.D., associate professor of medicine. John Wright - PSG Inc. (Littleton, MA) 1983. 432 pp. illus.

“The Origins of Anesthesia” by Dr. Sherwin B. Nuland, associate clinical professor of surgery, has been published for the members of The Classics of Medicine Library, Division of Gryphon Editions, Ltd., Birmingham, Alabama. Dr. Nuland has prepared an introduction to this volume, commentary which precedes the presentation of each historical paper, and an extensive bibliography. The excerpts and illustrations contained in this volume were furnished to the publisher courtesy of the Yale Medical Library.

ALUMNI NEWS

1927
On October 16, Harry Zimmerman was a guest of honor at a dinner which initiated the celebration of Montefiore’s Centennial Year to commemorate the hospital’s founding in 1884. Dr. Zimmerman, who is a member of Montefiore Medical Center Staff and Alumni Association executive committee and principal scientific advisor to the Centennial Committee is a consultant in pathology at Montefiore and professor of pathology emeritus at the Albert Einstein College of Medicine.

1932
Conrad Lam and his wife, Marian, were honored recently at a farewell reception on the occasion of Dr. Lam’s retirement after 50 years of service at Henry Ford Hospital in Detroit, Michigan. Among the letters of recognition which were presented to Dr. Lam at the reception were those from President and Mrs. Ronald Reagan, Michigan’s Governor James Blanchard, U.S. Congressman Carl Levin, Senator Don Riegle, Mayor Coleman Young, Henry Ford II, and Stan Nelson, Hospital executive vice-president.

The reception was attended by colleagues from the Division of Cardiac and Thoracic Surgery, other physicians and HFHers, according to an account published in the Henry Ford Hospital Weekly Newsletter. In addressing his remarks to Dr. Lam, Dr. Donald Magilligan, Jr., head of Cardiac and Thoracic Surgery said, “Dr. Lam, you will be remembered by your accomplishments at HFH — 8,500 operations and 207 articles — in addition to being one of 10 world pioneers in cardiac and thoracic surgery. This gathering is a very small way to say ‘thank you’ for what you’ve contributed to HFH. You make us all feel very proud.”

He also announced a special tribute to Dr. Lam that will continue year after year. The Annual Conrad R. Lam Lectureship of Cardio Thoracic Surgery, a new yearly lecture series, is to be sponsored by the Division of Cardiac and Thoracic Surgery and is scheduled to begin in 1984. The inaugural speaker will be Dr. Denton Cooley of the Texas Heart Institute.

In expressing his appreciation, Dr. Lam said, “This has been great. I owe much to everybody here. I only wish that all of you could have been with me in medical school at Yale University in 1931. Right before I came to HFH, I was told ‘Conrad, you’re wasting your time taking the exams to work at HFL — you’ll never make it.’ That was a long time ago. Now, maybe I rate a place on the wall”, he said, pointing to the portraits of noted Henry Ford Hospital physicians which hang on the walls of the Staff Dining Room.

1933
The first of the Annual Robert W. Huntington, Jr. Lecture Series was presented by Dr. George Lundberg, editor of the JAMA, at Kern Medical Center in California on November 4 and 5. The lecture series was named in honor of Robert W. Huntington, who, for twenty-five years in the Kern County Service pursued his interests in coccidioidomycosis, neoplasms and forensic pathology.

1949
In July it was announced that the 616-bed patient care towers and central core of the North Division of Duke University Hospital have been named the Anlyan Tower in honor of William Anlyan, chancellor for health affairs and senior administrative official Duke University Medical Center since 1964. In his announcement, Duke University President Terry Sanford noted that “naming the tower for Dr. Anlyan honors a man who is a national leader in medicine and in medical administration. He has kept Duke on the cutting edge of medical research and practice. He inspired the extraordinary Duke North Hospital and led the University through the challenge of its construction. He is the principal figure in Duke Hospital’s greatest expansion, which this building represents.”

1951
Daniel Freedman is now Judson Braun Professor of Psychiatry and Pharmacology and director of the Division of Adult Psychiatry and vice chairman, Department of Psychiatry at the University of California at Los Angeles.
1952

Harvey Young wrote recently of his two new responsibilities: "I have started my first of three years as a member of the Board of Trustees of the Pacific School of Religion in Berkeley, California. It is the oldest seminary in the West, having been founded in 1866. I have attended the first meeting of the Board and am sure I shall enjoy the challenge and the responsibilities of membership. I have also started back into organized medicine. I was elected as member of the House of Delegates of the Washington State Medical Association in September. I am committed to four years, the last three as speaker of the House of Delegates. So I am not suffering from an excess of free time."

1955

William Edward of Albuquerque, New Mexico, has been elected to the Board of Governors of the Association of Yale Alumni for a three-year term.

1956

In a recent message, Hawaii’s Governor George Ariyoshi extended “on behalf of the people of Hawaii, our deepest appreciation to Dr. William H. Hindle for his dedicated service and leadership as a member and chairman of the Commission on Population and the Hawaiian Future.” Dr. Hindle was a member of the Temporary Commission on Population Stabilization in 1971 whose work led to the establishment in 1973 of the Commission on Population and the Hawaiian Future; in 1974, he began serving as a member on that commission and in 1975 was appointed by Governor Ariyoshi to the chairmanship, a position he has held for the past eight years. The citation further states: "Dr. Hindle’s eminently sound guidance of the commission’s work has helped to increase community understanding of, and concern for, the serious impacts of population pressures and the vital need for population planning and growth management to protect the limited resources and fragile environment of our island state.”

With the fulfillment of its mandate and on its own request, legislation was passed terminating the commission as of July 1, 1983; its functions of population planning and management will be absorbed by the Department of Planning and Economic Development.

A note received from Dr. Hindle in October stated that he has been elected president-elect of the Hawaii Medical Association and that he has served for six years as treasurer of the H.M.A.

1959

Ronald DeConti wrote recently that he became professor of medicine at Albany Medical College and chief of oncology at the Albany Veterans Administration Medical Center Hospital as of September 1. Dr. DeConti left Yale in 1974 to become director of oncology at Springfield (Massachusetts) Medical Center, now known as Bay State Medical Center, and from 1980 served there as acting chief of the combined Hematology/Oncology Section until he left for his new position in Albany.

1962

David Gelfand was named a fellow of the American College of Radiology in recognition of his outstanding performance in medicine. He was so honored at the annual meeting of the College in Denver in September. He is affiliated with North Carolina Baptist Hospital in Winston-Salem.

1964

Diane Shrier has been awarded the Exceptional Merit Award for 1982-83 by the University of Medicine and Dentistry of New Jersey. This award, which recognizes those members of the faculty who achieve a level of productivity and excellence which substantially exceeds accepted standards, was also awarded to Dr. Shrier for 1980-81. Dr. Shrier is clinical associate professor of psychiatry and pediatrics and director of child and adolescent psychiatry at New Jersey Medical School (Newark) of the University of Medicine and Dentistry of New Jersey.

1965

Robert Cohn wrote in August that since 1978, he has been associate director of the Clinical Laboratories at the Children's Hospital of Philadelphia and is a member of the Division of Metabolism of the Department of Pediatrics. His second book, "Metabolic Disease: A Guide to Early Recognition", co-authored with Karl Roth of the Medical College of Virginia was published by Saunders in May, 1983. A previous book, "Principles of Metabolic Control in Mammalian Systems", co-edited by R. Herman, R. Cohn and P. McNamara, was published by Plenum in 1980.

He also wrote that since graduating in 1965, he has taken great pride in the continued progress at Yale Medical School and especially looks forward to interacting with graduates who come to Children’s from Yale to continue their training.

Mohandas Kini has been elected president of the Massachusetts Society of Eye Physicians and Surgeons and chairman of the Section on Ophthalmology of the Massachusetts Medical Society. Dr. Kini, who resides in Wakefield with his wife, Joanne and their four children, practices ophthalmology in Boston. He is director of Retina Services and a consulting surgeon in ophthalmology at University Hospital, which is a teaching affiliate of the Boston University School of Medicine.

David Kupfer, professor of psychiatry at the University of Pittsburgh School of Medicine since 1975 and director of the Mental Health Clinical Research Center for Affective Disorders at Western Psychiatric Institute and Clinic since 1977, has been appointed chairman of the Department of Psychiatry at the University of Pittsburgh School of Medicine. Dr. Kupfer has received a number of honors during his career including the 1975 A.E. Bennett Research Award in Clinical Science, the 1977 Anna Monika Foundation Award for Research in Depression, and the 1979 Daniel H. Efron Award. He is on the editorial boards of several publications and has written more than 150 articles on affective states, sleep, and psychopharmacology.

1966

Reynold Spector has been elected to membership in the Association of American Physicians. He is professor of medicine and pharmacology at the University of Iowa College of Medicine where he serves as director of the Divisions of General Medicine and Clinical Pharmacology. During the current academic year, Dr. Spector is a visiting professor of biochemical
at Stanford University.

Richard Yules is the author of a new book, "The Pilot's Complete Medical Guide," an authoritative and up-to-date guide which discusses medical problems that affect flying capability, physical and mental fitness, common sensory misperceptions and physical reactions to altitude and flight phenomena.

Dr. Yules is a colonel and senior flight surgeon in the Air National Guard, USAF, and a senior FAA medical examiner and crash investigator. In 1976, he was named U.S. Flight Surgeon of the Year. He has written, in addition to four medical books, more than forty articles on aerospace medicine. Dr. Yules practices otolaryngology and facial plastic surgery in Worcester, Massachusetts.

1967

Stephen Schimpff has been appointed director of the University of Maryland Cancer Center at the University of Maryland School of Medicine and Hospital in Baltimore.

1968

Ralph Greco, chief of the Section of General Surgery and the Division of Surgical Oncology at Rutgers Medical School, has been promoted to professor of surgery. He is also chief of General Surgery and Surgical Oncology at Middlesex General-University Hospital in New Brunswick. Dr. Greco completed his residency at Yale in 1973. After two years of military service, he joined the Rutgers faculty as an assistant professor in 1975, and in 1979 was promoted to associate professor.

Dr. Greco has published widely in the area of surgical immunology. He is doing research on the biochemical bonding of antibiotics to surgically implantable devices and is also a participating principal investigator in the National Surgical Adjuvant Project for Breast and Bowel Cancer.

On September 1st, Elizabeth Short joined the staff of the Association of American Medical Colleges as director of the Division of Biomedical Research and Faculty Development and deputy director of the Department of Academic Affairs. She will be responsible for monitoring biomedical research policy issues and working with the AAMC's Council of Academic Societies member societies to advance biomedical research and faculty development.

Gordon Sasaki, who is assistant professor of surgery (Division of Plastic Surgery) at University of Southern California School of Medicine was awarded The Robert H. Ivy Award of the American Society of Plastic and Reconstructive Surgeons at their November meeting in Dallas.

The Award, made annually for the outstanding scientific presentation of the year, is for his presentation at the Society's 1982 meeting in Honolulu, Hawaii. His paper, "Pathogenesis and Treatment of Infant Skin Strawberry Hemangiomas: Clinical and in vitro Studies of Hormonal Effects", is to be published in the March 1984 issue of Plastic and Reconstructive Surgical Journal.

1969

David Upton wrote recently that he has written a new book, "Mental Health Care and National Health Insurance - A Philosophy of and an Approach to Mental Health Care for the Future" and that he is currently engaged in writing a textbook on psychotherapy and a book on the psychological aspects of hospital care. Dr. Upton, who resides in Alexandria, Virginia, formerly served as consultant to the United States Senate Veterans Affairs Committee; was consultant to the Los Angeles County Community Mental Health Center Systems; and has held the position of chief of psychiatry at the United States Army Mental Health Clinic at Fort Belvoir, Virginia.

1970

A novel by Robert Litman entitled "Wynnefield and Limer" has recently been published by the Ivy League Press, Inc. Of Arlington, Virginia. This story about a young doctor and his fight to overcome great adversity should have wide appeal. The author, a family physician in Ogdensburg, New York, is a member of the medical staff of the A. Barton Hepburn Hospital and is currently president of the Northern New York Chapter of the American Heart Association.

1971

On October 5, Ralph Kirmser received the 1983 Magida Award presented by the Richard and Hilda Rosenthal Foundation of Stamford, Connecticut. Dr. Kirmser, an internist in Norwalk, was cited for demonstrated, notable capability in patient treatment and care. The Magida Award was established in 1979 by the Rosenthal Foundation to honor the late Dr. Melville Magida of Stamford and his qualities as a concerned and outstanding physician.

Dr. and Mrs. Kirmser and their three children reside in Wilton.

HOUSE STAFF

1946

John McGovern was recently honored by the American School Health Association by being awarded the William A. Howe Award, the Association's highest tribute, at its annual convention in Louisville, Kentucky. Dr. McGovern was cited for his enduring advocacy of, and meritorious contributions to, the health of the nation's children and youth.

1948

David Hamburg is president-elect of the American Association for the Advancement of Science (AAAS) and is scheduled to assume office as president at the annual meeting in May 1984. Dr. Hamburg served as president of the Institute of Medicine of the National Academy of Sciences for a five-year term beginning in 1975. In 1980, he moved to Harvard, where he founded a new Division of Health Policy Research and Education. He assumed his present position as president of the Carnegie Corporation in January 1983. Since moving to the Carnegie Corporation, he has given considerable attention to the problems of conflict between groups and nuclear war.

1957

Herman Kamenetz, chief of Rehabilitation Medicine at the Veterans Administration Medical Center in Washington, D.C., wrote at the end of July that he would be retiring "in a few days and it is a particular joy for me that Nessan McCann (HS 66), will take over my position at this Medical Center."
1961
Chase Peterson took office as president of the University of Utah on August 1, 1983. He was formerly vice president for health sciences and became nationally known last winter as spokesman for the University of Utah medical team when Barney Clark struggled to live with an artificial heart.

1962
Samuel Hellman is now physician-in-chief at the Memorial Sloan-Kettering Cancer Center in New York City.

1966
"Your Aching Back: A Doctor's Guide to Relief" by Augustus A. White III, has been published by Bantam Books of New York City. Dr. White is professor of orthopedic surgery at the Harvard Medical School and chief orthopedic surgeon at the Beth Israel Hospital in Boston. In this well illustrated paperback volume written for backache sufferers, Dr. White provides a great deal of valuable information and also gives answers to questions frequently asked by his patients. As he notes in the introduction, "I'm writing this book to tell those of you with back problems what scientific and clinical research has substantiated to be true about backache." It is a book which should be helpful to physicians and patients alike.

Nessan McCann has been named the new chief of Rehabilitation Medicine at the Washington, D.C. Veterans Administration Medical Center, according to a letter received from Herman Kamenetz (HS 57), his predecessor.

1970
Robert Resnik has been named chairman of the Department of Reproductive Medicine at University of California at San Diego.

1976
Leon Speroff, professor and chairman of the Department of Obstetrics and Gynecology at Oregon Health Sciences University School of Medicine, has been appointed professor and chairman, Department of Reproductive Biology, Case Western Reserve University School of Medicine.

1979
Robert Shoen has joined Dr. James Kenney and Dr. Charles DiSabatino, Jr. in the private practice of internal medicine and rheumatology in New Haven.

PUBLIC HEALTH
1974
Gregory Belok and his wife, Diane, are the proud parents of a son Arie Chaim Belok, born on June 25, 1983. Dr. Belok wrote in July, but his news was received too late to appear in the summer issue of Yale Medicine.

IN MEMORIAM
Robert F. Zimmerman, M.D. ex med'31
June 30, 1983

Donald R. Mills M.D.'34
August 2, 1983

Frederic E. Houghton ex med'37
November 23, 1979

Hugh H. Butler M.D.'41
July 4, 1983

Edwin D. Murphy M.D.'43
September 20, 1983
(March)

Richard K. Gershon M.D.'59
July 11, 1983

Stuart J. Brill M.D.'68
August 15, 1983

1979 ALUMNI WEEKEND
JUNE 7, 8 and 9
PLAN NOW TO ATTEND!

Have we heard from you recently?

Have you received a special honor or award? Have you been elected to office in a professional society? Have you travelled in a foreign country and/or participated in an international seminar? Are you working in a particularly interesting, unusual area?

If you have news about yourself or about your classmates, please send items to the Editor, Yale Medicine, 333 Cedar Street, New Haven, Connecticut 06510. The Alumni News section welcomes news from medical alumni, public health alumni and former house staff.
Message from the Medical School Alumni Fund Chairman

The Medical School Alumni Fund again broke all previous records and I thank each and every one of you who helped to make the 1982-83 such an outstanding success. Final receipts were $449,065 an increase of 51% over the amount received in 1981-82. This total includes dollars earned from the Baumgartner Challenge awards, earned income and two large gifts to the endowment program. The number of contributions from alumni, former house staff, parents and friends rose to 1,889; alumni participation increased to 50%.

In January after the Medical School Alumni Fund and the Public Health Alumni Fund earned the entire $75,000 Baumgartner Challenge, Leona Baumgartner '32 Ph.D., '34 M.D., generously provided an additional challenge of $50,000 for new and increased gifts for the School's student loan program.

The challenge awards, and the interest and efforts of the vice chairmen, the class agents, reunion phonathon volunteers, and student telephoners all provided the momentum that made our campaign so successful.

I appreciate everyone's support and I am confident our program will continue its upward swing.

Lowell I. Goodman '51

Message to Public Health Graduates and Friends

Money raised by the Public Health Alumni Fund is used for the Department's student financial aid program. Each year the support received from EPH alumni and friends is an indication not only of their loyalty, but also shows their awareness of the financial crisis facing today's Public Health students.

We want to thank everyone who helped us to achieve our goal with a grand total of $36,572. A very special acknowledgment goes to Dr. Leona Baumgartner who provided us with two generous challenge awards. These incentives continue to have a great impact on the level of giving and the number of contributors. We look forward to another, even more, successful year.

Jan A. S. Stolwijk
Kathleen H. Howe
Samuel B. Webb, Jr.

Robert W. Berliner
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PUBLIC HEALTH ALUMNI FUND CLASS PARTICIPATION

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Alumni $34,149 37%  $31,532 33%
Interest and Miscellaneous Gifts 3,984 1,262
Baumgartner Match 10,667 3,778

Public Health Alumni Fund Total $48,800 37% $36,572 33%
1944
Carl E. Andrews
Edward J. Conway
John C. Shide
Frank W. Courtyman
Charles H. Crothes
Lawrence G. Crowley
John H. Doherty
Donal D. Iuphery
Caral Goldenthal
Charles A. Hall
Howard L. Hamilton
W. Raymond James
Edith M. Jurka
Frederick J. Kranuskopf
Ronald E. Josee
Ellen P. Mackenzie
Elhas J. Marsh
Katharine H. Martin
Nora H. Mason
Joseph Massaro
A. Reese Matteson
Paul L. Molumpathy
Lawrence K. Pickett
Laurence G. Roth
Haynes W. Sheppard
Sarah P. Sherwood
Nicholas P. R. Spinelli
Piscella Tatt
Anthony Varjadian
Caldin W. Woodruff
Reuben Zucker

1945
George H. Allison
A. John Amony.
Albert S. Atwood
Frederic M. Blodgett
Richard W. Breck
Louise H. Burr
Alice S. Cary
Sanford F. Crockell
Jay B. Cohn
Eleanor Davis
Charles E. McLean
Joseph F. Kelly
Bostwick
Frank W. Courtyman
Charles H. Crothes
Lawrence G. Crowley
John H. Doherty
Donal D. Iuphery
Caral Goldenthal
Charles A. Hall
Howard L. Hamilton
W. Raymond James
Edith M. Jurka
Frederick J. Kranuskopf
Ronald E. Josee
Ellen P. Mackenzie
Elhas J. Marsh
Katharine H. Martin
Nora H. Mason
Joseph Massaro
A. Reese Matteson
Paul L. Molumpathy
Lawrence K. Pickett
Laurence G. Roth
Haynes W. Sheppard
Sarah P. Sherwood
Nicholas P. R. Spinelli
Piscella Tatt
Anthony Varjadian
Caldin W. Woodruff
Reuben Zucker

1946
Margaret J. Allbrink
William G. Banfield, Jr.
Aron I. Beck
Franklin C. Behrle
Sanford G. Blodstein
Linus W. Cave
James F. Cooney
Robert R. Cooper, Jr.
Thomas J. Dool
Gregory R. Flyn
Martin E. Gordon
Charles S. Judd, Jr.
Harold King
Benjamin F. Kitchen, Jr.
James A. Kleeman
Vincent J. Longo
Richard H. Mann
Thomas J. Mathieu
Hugh J. McLane
Joe D. Morris
John H. Merton
John I. Neville, Jr.
Laura W. Neville
Frances R. Reilly
David H. Riege
Phillips F. Roth
Julian A. Sachs
Donald P. Seld
Richard G. Sonos
Colby S. Stevens
R. Bruce Haver
Robert R. Wagner
William J. Wademeyer, Jr.
Thomas J. Whelan, Jr.
Hugh R. Williams
Tuohy W. Wing, Jr.

1947
George R. Barnes, Jr.
Henry N. Blairsield
Albert W. Bostrom, Sr.
John I. Bowser
William R. Breg, Jr.
John I. Cantlon
M. Richard Carlin
Henry Carlin
Charles R. Cavagnar, Jr.
Robert A. Chase
Amor J. Chernoff
William J. Collins, Jr.
Robert P. Darrow
Archie L. Dean, Jr.
Jean H. Dougherty
Owen W. Doyle
Franklin H. Eptstein
Edward D. Foord
Frank H. Horton
Robert J. Kerin
Don F. Kimminger
Richard P. Levy
Brock Levenson
Victor A. Macheinki
William K. McClelland
Robert I. Newton
Myron K. Nobil
Lawrence C. Perry
Edgar B. Phillips II
Oliver F. Pitkin
Irving Rudman
Avin Somberg
Igor Tamm
Patricia B. Tuthbury
Ellis J. Van Dyke
M. Henry Williams, Jr.

1948
Russell J. Barrnett
Edith M. Beck
Allyn G. Bridge
Arthur L. Coleman, Jr.
Ruth E. Cortell
G. Robert Downie
Victor A. Drill
Marie C. Duncan
Boswell Dool
Emil Frei III
Julian Frieden
Allan Green
B. Harold Griffith
Sylvia P. Griffiths
Beatrice A. Hamburg
Richard Hannah
Rosser Hart
Paul B. Kochler
Robert F. Lempe
John P. Morris
John B. Morrison
David E. Morton
Gerald R. Nowell
James A. Post, Jr.
George P. Rosett
Lewis P. Rowland
Benjamin F. Rush, Jr.
Gabriel A. Saviano*
Jerome H. Shapiro
Jesse P. Spear
Annemarie Goar
Paul Lalala
Wallace W. Turner
Paul W. Weld

1949
William G. Anlyan
Alfred F. Bacon, Jr.
Henry N. Blairsield
William D. Bevis
Jonathan S. Bishop
Thomas L. Chitaeffe
Mary P. Couchman
Phillip C. Couchman
Peter R. Cunningham
N. John Czernitz
Daniel W. Elliot
Gunnar O. Eng
Albert A. Fisk
Paul S. Goldstein
Eleanor C. Gordon
Frederic W. Gray
Jackson Harbison
Robert C. Howard
Benjamin A. Johnson
Frank D. Law
Orval I. McKay
Richard D. Otis
Julian I. Pichel
Edmund I. Piper
Charles Remmell, Jr.
Murray Z. Rosenberg
Daniel Rudman
Carl M. Russell
William H. Sewell
Raymond D. Sudarsky

1950
Russell N. Anderson
Lydal D. Asay
John E. Bosowy
William H. Bucier
Alvin Davis
Claude W. Delia
Karl E. Doel
Thomas J. Ferrara, Jr.
David Fine
Charles R. Glen
Clive A. Goldfield
John N. Goodwin
James H. Green
Robert H. Griswold
A. Daniel Hauser
Arthur I. Haynes
Lillian M. Hembree
Sidney S. Lee
Janus C. Lindner
Margaret S. Lyman
Harold March
Donald I. McClelland
John H. Meyers
Orlando J. Miller
Robert I. Secery
Cynthia J. Shipp
Jane B. Shumway
Martin Smith*

1951
Karel B. Absolon
W. Robert Adams
Thomas I. Amatruda, Jr.
Muriel H. Bagshaw
Eleanor C. Bigley
Allan A. Brandt
John B. Bridge
Daniel S. Freedman
Sidney S. Furth
Ralph M. Gofstein
Fowell S. Goodman
John I. Groel
Robert N. Hamburger
Charles R. Irwin
Paul D. Millkin
Walter S. Morgan
Albert R. Mowlem
Richard S. Munford
Charles A. Nugent, Jr.
Jose J. Patino
Arthur H. Pasa
Malcolm W. Post
William E. Stephenson
Harold M. Sterling
John S. Sullivan
William Taylor*
Andrew S. Wong

1952
John W. Arnold
Frank A. Carone
Frank R. Coughlin, Jr.
Philip G. Deane
Raymond S. Dull
James R. Dunham
William J. Johnson
James K. Luce
N. Karle Mottet
Robert F. Owen
Robert G. Petersdorf
Leon A. Phillips
John M. Roberts
Elizabeth H. Rush
Leonard Rush
Mary W. Schley
Donald H. Schutz
Robert B. Schutz
Virginia L. Swanson
John H. Wagner, Jr.
Doris L. Betthers
John I. Wallis
Harvey L. Young
Robert E. Zeppa

1953
Claude Bloch
Harold J. Bornstein
William R. Chatlee
Allen Chetrick
Rex B. Conn
Louis R. DelGuercio
James P. Dunn
Evans D. Faxon
Thomas O. Gentsh
Vincent L. Gott
Robert E. Hamlisch
Daniel A. Hauser
George J. Hoffman
David P. Holman
Peter S. Gartell
Alvin J. Keroack
Robert F. Kiley, Jr.
Richard R. Knowles III
Hildergard M. Leslie
Preston L. Leslie
Robert N. Melnick
Harvey L. McKay
William Potter, Jr.
Paul G. Quine
Jose Ramirez-Rivera
Barbara F. Rosenberg
Irwin K. Rosenberg
Virginia C. Salt
Richard A. Sinnott, Jr.
Orna N. Stoker
Lynn C. Stoker
Matthew A. Tandolph
William J. Vandervort
William A. Whalen, Jr.
John A. Wilson

1954
W. Dean Ashworth
Frank P. Berg
George W. Bostwick
Richard J. Bouchard
George N. Bowers, Jr.
Ralph K. Campbell
John R. Coolidge
Donald W. Cone
Alan H. Covey
Arthurl C. Crovatto
Donald D. Davis
Frederick J. Fiederlein
Walter J. Freeman
Orlando J. Galbreth
John H. Gerrity
Frank L. Gruskay
Nicholas A. Halasz
Robert P. Hatch
Walker R. Heap, Jr.
Eva H. Henrikson
Samuel J. Hunter
Herbert S. Harwitz
Robert F. Hestead
Robert J. I. Joy
Donald S. Kormfeld
Lowell A. Kudic
Robert N. Melnick
Richard L. Lindsly
Harriet Miller, Jr.
Paul N. Neufeld
James J. Nora
Lowell F. Olson
William S. Palmer
William J. Paul
Anthony V. Piccicillo
Richard D. Pullen
Jacques M. Quen
Edwin R. Ranzenhofer
Earl D. Rees
David M. Robinson
John K. Rosc
Elino M. Schmel
Leonard M. Silverman
Robert L. Stein
John W. Vosskuhler

* Deceased
Benjamin A. Shaver, Jr.
Donald W. Sherrick
Daniel R. Silhert

1957

Donald Agostinelli
Jack N. Blechner
Harry C. Briggs
John P. Carey
Albert K. Chun-Hoon
Louis Z. Cooper
Harold D. Cross
Brian Crowley
John D’Agostino, Jr.
Thomas H. Danaher
James R. Dorr
Edward L. Eyerman, Jr.
Salvatore Falbo
Harold J. Fallon, Jr.
Robert E. Fishbein
Ronald H. Fishbein
James R. Fitzgerald
Anthony L. Fons, III
Elizabeth H. Forsyth
Gary A. Fry
Robert H. Glass
Arnold H. Good
Jack P. Green
Joyce D. Gryboski
Malcolm Hill
Gilbert E. Hogan
Warren R. Johnson
William L. Kissick
Edward G. Levin
Jack Levin
Bennett F. Markel
Mark D. Marshall
David E. Martin III
Howard A. Minners
Robert K. Modlm
Hugh I. Moffet
Edward Call, Jr.
Jerrold M. Post
Fred Palace
Donald L. Miller
Eugene G. McCarthy, Jr.
William E. Radcliffe
William E. Radcliffe
Edward Longo
Eugene G. McCarthy, Jr.
Donald L. Miller
Harry G. Mayfield
Allan W. Nowcom
Buford L. Nichols, Jr.
J. Thomas Olin
Fred Palace
Jerrold M. Post
Charles H. Robinson, Jr.
Fred Stargardner
Robert G. Muffich
May Y. Wang
Ronald A. Yankec

1959

Scott L. Allen
Carol J. Amick
Robert S. Briggs
Asa Barnes, Jr.
Francis A. Beer
Jack F. Bowers
William C. Butlerfield
Edward Call, Jr.
Sidney M. Cohen
Ronald C. Conti
William T. Donegan
Gerald Fenchel
Robert L. Fisher
Robert J. Gonyea
Gerald B. Gordon
William H. Heydon
C. P. Hickson
Leonard Inker
John J. Jasaitis
Edvardas Kaminskas
David W. Kingsbury
Myron S. Lee
Kathryn H. Lewis
David L. Macken
Raymond L. Munk
John C. Marsh
D. Kent Moster
James A. O’Neil, Jr.
Robert H. Osberg
Nicholas M. Passarelli
Charles A. Phillips
Lincoln T. Potter
James D. Prokop
James R. Ralph
David P. Reed
Joseph D. Robinson, Jr.
Joseph D. Saccio
Constantine J. Sakles
Martin D. Schalman
Marc D. Schwartz
David B. Skinner
Sanford P. Solomon
James J. Stagnone
Lisa A. Steiner
Leo H. Von Euler
Murrel D. Wolf

1960

Victor Altshul
Alan W. Ames
Donald P. Buechendorf
Stanley K. Chung
Jon E. Courtenay
Louis A. D’Avanzo
Caldwell H. Esselstyn, Jr.
Warren H. Fisher
Paul J. Friedman
Alvin E. Friedman-Kien
Stanley M. K. Grill
Gary F. Garthman
James E. Gilman
Roland H. Ingram, Jr.
Daniel M. Jones
William S. Kaden
Eric P. Kindwall
Frank J. Kleeman
Susan L. Kleeman
Thomas P. Kugelman
Edward R. Lang
Thomas E. Lincoln
Edward Longo
Eugene G. McCarthy, Jr.
Donald L. Miller
Harry G. Mayfield
Allan W. Nowcom
Buford L. Nichols, Jr.
J. Thomas Olin
Fred Palace
Jerrold M. Post
Charles H. Robinson, Jr.
Fred Stargardner
Robert G. Muffich
May Y. Wang
Ronald A. Yankec

1961

Kenneth A. Arndt
Earl I. Baker
Frank B. Baker
Albert A. Bechthold, Jr.
Robert S. Briggs
David W. Brook
Orson R. Dee
Paul D. Deiter
W. Keith Hadley
William H. Heydon
C. P. Hickson
Leonard Inker
John J. Jasaitis
Edvardas Kaminskas
David W. Kingsbury
Myron S. Lee
Kathryn H. Lewis
David L. Macken
Raymond L. Munk
John C. Marsh
D. Kent Moster
James A. O’Neil, Jr.
Robert H. Osberg
Nicholas M. Passarelli
Charles A. Phillips
Lincoln T. Potter
James D. Prokop
James R. Ralph
David P. Reed
Joseph D. Robinson, Jr.
Joseph D. Saccio
Constantine J. Sakles
Martin D. Schalman
Marc D. Schwartz
David B. Skinner
Sanford P. Solomon
James J. Stagnone
Lisa A. Steiner
Leo H. Von Euler
Murrel D. Wolf

1962

Jon M. Aase
Paul H. Ackerman
Michael H. Alderman
Charles B. Anderson
Frederic P. Anderson
Ann B. Barnes
Spencer J. Brody
Dean E. Burkett, Jr.
Fredric K. Cantor
Richard N. Collins
Gary G. Eisenfeld
Joseph D. Ferrone, Jr.
John W. Foreman
Leroy A. Forstrom
Stephen J. Fricker
John N. Gertman
Roderick C. Haff
John T. Harrington
Patricia C. Hassakis
Walter W. Karney
Glenn L. Kelly
Bernard Kasto
John P. Lynch
Malcolm A. Martin
Stanley E. Matyszewski
William T. Menz
Malcolm S. Mitchell
David D. Nicholas
A. Richard Pashirer
Joseph Ross
James A. E. Spencer
Nancy A. Staley
H. Oliver Storloutd
Seth Halter
Sherwood Waldron, Jr.
Stewart R. Wright

1963

Arthur H. Ackerman
Miguel R. Alonso
V. Richard Back
Gordon S. Cohen
John E. Conte, Jr.
David S. Cross
Andrew Edin
John P. Elpouloss
B. Allen Flaxman
David H. Fram
William H. Friedwald
David H. Fulmer
Alexander R. Gaudio
F. John Gennari
Lee D. Goldberg
Peter B. Gregory
George H. Holsen III
Constantine D. Kyropoulos
William B. Lehmann
Craig H. Llewellyn
Edward G. Lund, Jr.
Robert H. Margulfs
Herbert Melzer
Robert E. Mueller
Jay M. Pomerantz
Garth D. Proctor
Joseph B. Stevens
Lee B. Talner
Peter V. Tishler
Lawrence Tremonti
Helen N. Walsh
Peter G. Werner
Seth M. Weingarten
Alfred J. Wosci
Parents and Friends

Sidney H. Abrams
Kurt I. Altmann
Dorrance J. Anderson
Robert August
Stanley August
John & Marie Babich
Edwin Beall
Suzanne Berman
Ormonde L. Brown
Minnie R. Cartwright
Abe Cazen
Richard Childs
Sidney J. Cohen
Willibald H. Conzen
Daniel W. DeRenzi
Kenneth T. Doran
William C. Drennan
William G. Dyess
Max Finkelman
Jose M. Garcia-Madrid
Roger W. Gilbert
Herbert I. Goldman
Harold Grant
Kenneth H. Gutner
Murray Halperin
Earl Hellerstein
Frederick W. Hellman
Robert E. Herzstein
Carl Hirshfield
Gloria F. Holmes
J. S. Holt
Harold Katz
Kenneth P. Kinney
Theodore H. Klein
Boris Kliot
Harry D. Krause
Sanford M. Left
Joseph Litchman
Joseph M. Merrick
Bennett Miller

Masao Nakamoto
Lewin Nankin
Herbert A. Nestler
Victor M. Newman
William G. O'Donnell
Richard D. Otis
William E. Palmer
Samuel Perlman
Levi V. Perry
Leonard Portney
Howard I. Ratain
R. Donald Reich
Irving Rosenberg
Joel G. Roth
Klaus G. Rucker
Jack Saltz
Harold & Frances Sampson
Joseph Schlesinger
Arthur A. Shachner
Norman N. Sharpe
Jerry Sherman
Norma F. Simonson
Antonio Siu
Allen Sosin
Philip Soskis
Mark L. Sternlicht
Pauline E. Swan-Ferm
Leo Teitz
Harold Weinberg
Milton Weinberg
Irene G. Werne
Tony Y. Wong
Rosalyn Yarmush
Sheldon M. Young
Herman H. Zusman

MEDICAL ALUMNI WEEKEND
ENLIGHTENING & ENTERTAINING!
PLAN TO JOIN YOUR CLASSMATES
ON JUNE 7, 8, & 9
Type for this issue of *Yale Medicine* was set by the staff—a major cause for the delay in publication, as we hunted and pecked our way through the articles and news, not to mention the names of the hundreds of generous alumni fund contributors. It is anticipated that in the future, setting our own type will prove an economical as well as efficient means of producing the alumni bulletin. Meanwhile, our apologies for the delay.
Stanley D. Truelson, Jr.
Librarian, Yale Medical Library
L 110 - SHM
Dr. Leon E. Rosenberg, one of the nation’s leading geneticists and a distinguished teacher and clinician, has been appointed the next dean of the School of Medicine. On July 1, he will succeed Dr. Robert W. Berliner, who has been dean since 1973. Dean Berliner plans to take a sabbatical year before retiring as professor emeritus of physiology and medicine.

Dr. Rosenberg, who is C.N.H. Long Professor of Human Genetics, Medicine and Pediatrics, helped organize the Department of Human Genetics and has been the chairman since it was established in 1972. Under his direction, the department has pursued a vigorous and comprehensive program, ranging from basic research into the molecular structure and function of the gene to caring for and counseling patients with genetic problems at Yale-New Haven Hospital.

In announcing Dr. Rosenberg’s appointment, President A. Bartlett Giamatti said, "The University and its School of Medicine are immensely fortunate that Dr. Rosenberg has accepted this important position. He is a distinguished physician-scientist and I know he will provide the school with superb leadership in the coming years. I wish to affirm again the University’s commitment to the life and work of the school, and to say how fortunate we all are to have in our next dean what we have had in Dean Berliner, an outstanding leader for the School and citizen of the University."

"Dr. Rosenberg is a highly respected member of the medical center community who has brought great skill and effective leadership as chairman of the Department Human Genetics," said C. Thomas Smith, president of Yale-New Haven Hospital. "I applaud President Giamatti’s choice and look forward to working with Dr. Rosenberg as we both seek to serve the joint interests of the hospital and the School of Medicine."

Born in Madison, Wisconsin, Dr. Rosenberg received his B.A. and M.D. degrees, both summa cum laude from the University of Wisconsin. Following internship and residency at the Columbia-Presbyterian Medical Center, he was a clinical associate and senior investigator with the National Cancer Institute's Metabolism Service from 1959 to 1962, when he first came to Yale as a senior assistant resident in medicine. He returned to the National Cancer Institute before he was appointed assistant professor of medicine at Yale in 1965. He was named professor of human genetics, medicine and pediatrics in 1972, and was appointed to the C.N.H. Long professorship in 1980.

Dr. Rosenberg has emphasized that he will remain committed to the clinical program of the School as well as to its teaching and research activities. "I look forward to the challenge that this appointment presents," he said. "The excellence of this place is a tribute to a fine faculty which has been recruited by successive Yale presidents and deans, to the high standard of the students we are able to enroll, and to the effective partnership between Yale's medical school and Yale-New Haven Hospital. This is a unique school which proudly demonstrates that successful cooperation can exist among the teaching, research and clinical sides of medicine."
Dr. Rosenberg is a fellow of the American Academy of Arts and Sciences, the American Association for the Advancement of Science, and past-president of the American Society of Human Genetics. He received a Guggenheim Foundation Fellowship in 1972, and the following year, the Borden Award from the American Academy of Pediatrics for outstanding achievement in research relating to infant nutrition and development of children. In 1982, the University of Wisconsin School of Medicine presented him with its Distinguished Alumni Citation, and that same year, he was elected to the Institute of Medicine of the National Academy of Science. Dr. Rosenberg is a member of numerous professional societies including the Association of American Physicians, the American Pediatric Society, the American Society of Biological Chemists, and the American Society of Human Genetics.

In 1980, when he was elected president of The American Society of Human Genetics, Dr. Rosenberg told his colleagues, "When your experiments don’t work, or your grant deadline is approaching, or your patients appear ungrateful, don’t unburden yourself to your undergraduates, your graduate students or your postdoctoral fellows. Lock yourself in the closet, jog, complain to your spouse, have a beer, but don’t frighten the kids. They might just take you seriously. If you must tell it like it is, please be sure to give equal time to the privileges and pleasures of academic life, to the dazzling sense of well-being that follows scientific discovery, and to the excitement that each of us knows lies beyond our current horizons."
Hospitals and the poor are not new acquaintances. Students of hospital history know that the first hospitals were primarily places for the poor to die. People of means did not go to hospitals, since there was little that could be done for patients except to provide basic sustenance and comfort. The charitable origins of hospitals reflected the concern, especially of religious groups, to provide a shelter for the disadvantaged of our society. The development of medical knowledge and technology which changed hospitals to places of healing also changed their clientele to all members of a community.

Since most hospitals began for charitable purposes, they maintained that format as they changed from social agency to technical institute to complex corporation. Throughout this evolution, non-profit hospitals have continued to provide services to people with little or no resources. Unfortunately, the pressure on financial performance may have caused some institutions to forget these charitable origins and to focus on doing well financially versus doing good for the community. Although too often not understood, it is necessary to be financially strong in order to be able to provide free services. While charity care is free to the recipient, it obviously costs something to provide it. That cost must be supported by resources; good will is insufficient. Forgetting our charitable origins, however, ignores one of our reasons for being and invites treatment as any other commercial enterprise. Preservation of our non-profit status requires attention to the reason it was conferred.

Non-profit hospitals have always attempted, to varying degrees, to make services available to the disadvantaged. Prior to the passage of Medicare and Medicaid, government payment for "charity" or "welfare" patients was often a token amount that was a fraction of the costs. Hospitals made up the difference. However, since the development of cost-based payment, there has been a myth that hospitals were paid by certain buyers of care, especially governments, on a full cost basis. The public, and even some hospital staff, believe that all costs are paid by third-parties. Unfortunately, such is not the case. Even after the implementation of Medicare and Medicaid, hospitals have continued to be paid on a cost-minus basis for government-sponsored patients, although payment levels have been significantly better than prior to these programs. Certain expenses, such as free care, bad debts, fund-raising costs and a provision for capital requirements (except for for-profits), were all excluded from the so-called cost-reimbursement equation.

We have allowed, indeed required, the non-profit hospitals of our nation to function as quasi-tax authorities with income redistribution functions. Government underfunding has forced hospitals to levy a tax on non-government patients to make up for the shortfall on patients paid for by governments. Hospitals with large numbers of low-income, government-sponsored patients are especially vulnerable to such underpayment.

The extent to which a hospital serves such patients determines the degree of increase in charges to other patients to cover this shortfall. This cost-shifting technique, while useful in the past, will become a

Mr. Smith is president of Yale-New Haven Hospital
historical relic in the near future.

If the achievements of the health sector were applied to another area, it would be judged a raging success. Goals were achieved regarding increased access, comprehensiveness of care, diffusion of technology, expansion of knowledge, increased capacity, high utilization, recession-proof employment and constantly increasing sales. Since 40 percent of resources for this sector come from governments, who have other priorities, such success interferes with other obligations. Therefore, instead of being applauded for our achievements, we are being scrutinized for our excesses.

We seem to have passed through an era of societal concern that everyone have access to all health services. While we fell short of that goal, we came close. A Robert Wood Johnson Foundation report showed that the number of visits to physicians per person per year changed between 1964 and 1978 in favor of the poor. Specifically, in 1964 the poor averaged 24 percent less visits than the non-poor, whereas in 1978 the poor averaged 19 percent more visits. In terms of expense, the same study showed average Medicaid cost equal to the population average, suggesting equivalent utilization of services by the poor.

Limited government resources have called attention to the need to place limits on growing government obligations. Perhaps no other area of social service support has had the somewhat open-ended funding as health. As governments have attempted to augment or provide support for other essential services, i.e., housing, food, general assistance, even education, they have been far more restrictive in goals and practice than in health. Some of us believe that health deserves such special treatment due to its essentiality for sustaining life and enhancing its quality. However, other essential needs have never been supported at the same qualitative level as have health services. Unfortunately, for both the recipients and the providers, mainstream health care seems destined for the lowest common denominator which is applied to other essential social services.

Sadly, poverty breeds health problems. While attending to disabling disease or injury is a priority across all segments of society, maintenance of health does not merit priority attention from people who are unemployed, hungry and worried about the next rental payment. In addition, given the high proportion of secondary school drop-outs in this category, little opportunity has been available to instill the importance of prophylactic care and the impact of life style choices on health status. Consequently, problems develop that might be ameliorated, but they are just as likely to reappear.

The over-used slogan, "Health Care is a Right", has perhaps deluded us into believing that such an assertion made it true. While much legislation has been passed to improve access to services, there has not been statutory and funding support to undergird the slogan. Absent any legal right, therefore, we must continue to depend upon a sense of moral obligation to support the assertion.

"Rights" imply that someone or some agency (usually government) has responsibility to assure that they are fulfilled. Without an assured government commitment to guarantee delivery of needed services, health providers are left to try, as they have historically, to play a quasi-governmental role without funding to support it or taxing authority to finance it. This places providers in the position of deciding how to allocate their scarce resources between individual needs which may be compelling, e.g., liver transplants, versus attempting to do the greatest good for the greatest number of people. Such profound decisions are never easy, and they are impossible in the face of individual need. No one is comfortable in deciding to withhold available care for financial reasons. Broad public policy guidelines should be developed through the political process in consultation with providers, rather than leaving such judgements to ad hoc, emotional circumstances.

While health services are essential to all segments of society, medical treatment of diseases which grow out of poverty conditions is analogous to treating symptoms, not underlying causes. Episodic conditions may be ameliorated, but they are just as likely to reappear. Acute health services barely touch the fundamental problems which produce some of the disconcerting health statistics.

In the recent important book, "The Social Transformation of American Medicine", author Paul Starr commented on the doubt that developed in the late 1970's regarding the ability of the health system to solve all health problems. Several pertinent quotes portray the cynicism which developed in concert with concern about rising costs:

"Instead of merely questioning whether hospitalization and surgery were excessive, critics began to ask whether medical care made any difference in the overall health of society."

"It had long been known that medical care, especially when compared with the environment or social behavior, has relatively modest effects on mortality rates... It suddenly struck intellectuals and policy makers of diverse persuasions that this was the answer to those who constantly wished to expand access to health care."

"If the first revelation of the seventies had been that a 'health care crisis' existed, the second revelation was that health care hardly affects health... the generalization of doubt undermined the generalization of rights. Distributive justice is a morally compelling concern, after all, only when what there is to distribute, or redistribute, is truly valuable. If it is irrelevant or harmful to human welfare, the poor would be better off without it."

Such skepticism has forced health providers to carefully evaluate the efficacy of treatment programs. Closer scrutiny is being applied to new technology to be sure that it will make a difference for patients, either therapeutically, economically, or in terms of comfort or human dignity. Too often, new medical technology is additive, rather than substituting for existing modal-
ities. Changed financial incentives will have a marked impact on past practices of each hospital having all alternative services, to having only those which are most therapeutically beneficial and cost effective.

Despite a healthy doubt about health services solving problems which are best addressed by other social interventions, there remains a significant demand for necessary services by the poor. Even though medical interventions may be episodic of broader underlying social problems, the episode must still be managed. Medical care will still have to be provided and hospitals will be the major providers. What alternatives are available to hospital leadership to cope with the probable continued inadequate funding for care for the permanent and temporarily poor, as well as other financial pressures on our institutions? One simplistic solution, articulated by a former Secretary of the Department of Health and Human Services, is that hospitals are so obese that the loss of fat is not only achievable by hard-nosed management, but it will also result in a healthier hospital with little untoward impact on patients. Presumably, this would solve our financial problems and assure the poor of needed care. To be sure, honest appraisal requires acknowledgement that such steps can be achieved in some hospitals. Similarly, many governmental programs can be managed more effectively, as can many businesses. No sector of our society (including HHS) has a corner on management wisdom and skills, nor is any perfect. We can all utilize resources more effectively.

Rather than be defensive, we should be sure we understand and convey to our communities the consequences of financially-oriented decision-making to health services. Certainly, steps should be taken to eliminate inefficient practices. If that means merger between institutional programs which will assure the community access to effective services, it should be done, regardless of bruised institutional egos. However, if program closure means patients will not have access to needed services, the community must decide what price it is willing to pay to have them available.

Some communities have decided that the most attractive solution is to turn their hospital (sometimes a government-owned facility, sometimes owned by a non-profit entity, even religious institutions) over to a national for-profit hospital chain. No doubt, such steps are attractive in the short-run, because of the financial relief provided. In addition, the management responsibilities are assumed by an organization that may be better able to handle them. However, the long-term impact of such a step on the less fortunate of the community may be disastrous. A recent series in the St. Petersburg, Florida newspaper, The St. Petersburg Times, described the impact of for-profit institutions on those without the ability to fully pay for their care. Denials of service and shifting of patients to non-profit hospitals is common in this environment.

Other newspapers and magazines have recently had numerous articles on changes occurring in the health care industry. Several have featured the increasing role of large corporations which control health services. This reasonably recent phenomenon was noted in Paul Starr’s book, as he expressed his views of one impact from this trend:

“...A corporate sector in health care is also likely to aggravate inequalities in access to health care. Profit-making enterprises are not interested in treating those who cannot pay. The voluntary hospital may not treat the person the same as the rich, but they do treat them and often treat them well. A system in which corporate enterprises play a large part is likely to be more segmented and more stratified. With cutbacks in public financing coming at the same time, the two-class system in medical care is likely to become only more conspicuous.”

Perhaps in our perceived role as guardians of the community’s health, fulfilling a quasi-governmental function, we have assumed that we are best able to make decisions as to how the community expends its health care dollars. We have been allowed to function relatively freely in the past, but concern about costs is changing the locus for decision-making away from providers. Buyers of care will now be calling the shots. Our burden will be to assure that the consequences of decisions are fully understood, including any untoward impact on a segment of patients. This will require that we understand what difference health service makes and that we function as advocates for those least able to speak up for their needs.

Our institutional missions proclaim our commitment to everyone’s needs, but the price may become too high. Our past income redistribution practices seem short-lived. Furthermore, with the demise of cost-based payment, we will no longer be paid for what we do. Now we must learn to do that for which we get paid. The distinction between these patterns is significant and far-reaching. If those who buy our services are willing to pay only for the services provided and nothing else — including subsidizing care of the poor — then we will either comply with such strictures or go out of business. Perhaps some hospitals or programs should close. However, the poor are likely to be most affected by such terminations, as the non-poor can seek service elsewhere. Therefore, our only option is to devise ways to reduce costs to levels which buyers are willing to pay.

In the short-run, we may see several actions by hospitals:

1. Product-line evaluations will, inevitably, result in the termination of programs which are not financially viable. The poor are especially vulnerable to such changes.
2. Some patient shifting may occur as providers seek to minimize their free care and bad debts. The absence of public hospitals in Connecticut may limit patient transfers between hospitals, but it will not mitigate the existing pattern of ambulatory care. While hospitals and non-hospital providers
may compete for remunerative ambulatory services, there is little competition with hospitals to serve those with few or no resources. Means need to be developed to share this community responsibility, or certain institutions will eventually collapse from this unevenly distributed burden. Physicians, particularly, should consider the long-term consequences of this pattern and their responsibilities to share some of the load.

3. Health services to the poor will be scaled down to essential services. Basic care will be provided, absent amenities which may be considered desirable, but not critical.

4. More careful financial screening will occur to assure that those receiving subsidized services are those who most need them. Those eligible for governmental support will be required to show evidence of approval for it prior to receiving service.

5. Emergency care will continue to be provided by hospitals, but the closure of high-cost, low usage services will result in shifting of patients requiring specialized care which will be available at fewer institutions. Non-emergent care will be limited or deferred.

The longer view is always cloudier. However, a number of forces already in motion suggest probable nationwide trends that will ultimately affect all hospitals:

1. Prudent buyer efforts by government and business will force institutions to pare costs to levels purchasers are willing to pay. Hospitals will seek government-financed patients, even at reduced payment levels, to the extent that marginal costs are covered.

2. Multi-institutional development will enable vertically integrated providers to contract directly (perhaps via capitation) with buyers for a full range of services. Incentives will be developed to contain buyer expense and to place risk on providers, as well as patients.

3. Contracted services will be limited to those deemed essential or with a demonstrable payoff. This will include support for so-called wellness or prevention programs.

4. Hospitals will aggregate resources among themselves and with other providers to gain advantage of scale, to spread risk, to share expertise and to enhance competitive positions.

Despite our dreams, we never eliminated two-tier care. In fact, there are several tiers and, in health as in other areas, personal resources determine which tier we are on. Perhaps limited resources make the “equal access, equal care” goal unattainable. Even if we cannot achieve equal care, just as we have not achieved equality in education, nutrition, housing or in other important areas, we must not relent on equal access. Hospitals have long been the guardian of the disadvantaged in our communities, never doubting people’s right to be served. What is at issue is to what extent, and how, the financial burden will be handled.

My preferred definition of management is trusteeship for other people’s interests. This suggests that those who are responsible for our institutions — trustees, management, medical and nursing leadership — must have a clear understanding of who such “other people” are, as well as what their “interests” are. The history of Connecticut’s hospitals suggest that they do have such understanding; they exist to serve their community with responsive and responsible health services. This constituency has included all of the community, both the poor and the non-poor. However, in an environment of increasingly scarce resources, decisions will have to be made which may negatively affect the poor in the short-term. The ultimate strategy has to be to prevent institutional financial failure, in which case no one benefits. Such survival strategy will undoubtedly create hardships for those with perhaps the greatest need and the least resources, financial and political, to press their cause. In the give and take of an individual’s needs versus those of a community, the democratic process is prone to decide on the greatest good for the greatest number. One person’s loss may be several other’s gain. While that may make good political and financial sense, we must vigilantly defend the presence of compassion and respect for human dignity as a necessary counterbalance to data-derived decisions. Our survival requires tough-minded management of the resources entrusted to us. Our missions, history, and, indeed, our conscience demand that all decisions take into account their human impact on those we seek to serve.
GERALD KLATSKIN, M.D.

By James L. Boyer, M.D.

In May 1983, Dr. Gerald Klatskin, David Paige Smith Professor Emeritus of Medicine, received the Julius Friedenwald Medal, the highest honor of The American Gastroenterological Association. On this occasion, Dr. James L. Boyer delivered the following tribute to Dr. Klatskin. It is reprinted here with permission of the Elsevier Publishing Company, Inc., from Gastroenterology; 85: 1235-8, copyright 1983 by The American Gastroenterology Association. Dr. Boyer, professor of medicine, succeeded Dr. Klatskin as director of the Yale Liver Study Unit.

Today, the American Gastroenterological Association presents its highest honor to a legendary figure in American medicine, a man who has made an indelible impression on generations of students and physicians by his single-minded dedication and devotion to the study of the liver and his compulsive, yet articulate, analysis of hepatic pathology and clinical liver disease.

In the few minutes that we have this morning, I will attempt to capture something of the essence of Gerald Klatskin, and to trace a few historical events that have influenced and highlighted the career of this distinguished clinician-scholar.

Let me begin with my own impressions as I entered his office for the first time in the fall of 1965, seeking a fellowship appointment. My anxiety having been heightened by repeated stories of his imposing intellect and personality. But hardly had I explained the purpose of my visit when he spied, tucked under my arm, a box of liver biopsy slides I had brought from Calcutta, where I was in the Public Health Service. He immediately examined them under the microscope in great detail without so much as a word, then launched into a full discussion of the subject, including background literature, as if he had just prepared a most comprehensive review. From this extraordinary encounter, which I later learned was his daily routine, began a long association as his student, colleague, and most importantly, as with many of you here today, his devoted and admiring friend. What are the characteristics of this man we honor today?

Dr. Gerald Klatskin, known affectionately as "G.K." or the "Klat," or simply "Gerry," is unmistakable when one encounters him in the hospital corridors, in the hotel lobby at an annual meeting, or, as is most likely, in his office, as the photograph so characteristically depicts. The broad forehead, the bushy eyebrows, the gruffness of his voice, these outward physical manifestations of a "Great Bear," as he has been called, belie the personality beneath. He is, in fact, a kindly, unpretentious man, whose entire career has been focused, with nearly absolute determination, on the pursuit of medicine and his specialty. Gifted with extraordinary intelligence and qualities of complete honesty and integrity, his scholarship encompasses the entire range of clinical liver disease, including disorders as diverse as sarcoidosis, porphyria, chronic hepatitis, alcoholic liver injury, hepatic adenomas, and bifurcation tumors (the latter bearing his name). He is a pioneer in the development of liver biopsy techniques and their histologic interpretation, a supreme performer of the clinical consultation, the ultimate visiting professor and biopsy consultant, and mentor to many leaders in medicine today.

How did all this begin? I must confess that despite my long association with Gerry, I decided to hold a series of interviews with him in preparation for this occasion. Quite frankly, I did not want to miss the opportunity to hear the story right from the beginning. It will come as no surprise to those of you who know him well that I spent many hours at this activity — all delightful — nor will you be surprised to hear me say that he has not forgotten a single name, nor anecdote, nor episode. Indeed, the only fact that he cannot recall is why he decided to study medicine in the first place! Let me highlight just a few of these events.

Dr. Klatskin was born in 1910 in New York of parents of Russian origin. He graduated from high school at the young age of 16, already interested in medicine, and completed college at Cornell in only three years, graduating Phi Beta Kappa in 1929 at the onset of the Depression. During his freshman year at college, he wandered into the embryology and histology labs and discovered to his surprise and delight that tissues could be imbedded, stained, and examined under the microscope. He was enthralled by the process, and visited so often that the chairman of the department offered him a part-time job. Here began his fascination with histology. He worried about entrance into medical school, but was easily admitted to Cornell Medical School in New York, where he graduated first in his class in 1933.

One spring weekend, a medical student friend drove him to New Haven. Elm trees spanned Cedar Street in those days, and the friendliness of a small town and the relaxed atmosphere of the students and housestaff all appealed to this young man from Brooklyn. He applied for an internship in medicine and was accepted. Eugene DuBois, Chief of Medicine at Cornell, preferred that he apply to Johns Hopkins, telling Gerry that Yale was "just a little village hospital" and "you can do a lot better." But Gerry was already enamored with Yale, and in July of 1933, he began the first of two lifelong obsessions; July 1983 marked the 50th anniversary of this extraordinary association. His second obsession was, of course, with the liver. Like many hepatologists of his era, Gerry's World War II army experience was central to this development. Posted in Calcutta, India,
because of his curiosity to learn more about rare and exotic diseases, he became interested in hepatitis and amoebic abscess. Later, when transferred to Schick Army Hospital in Iowa, he met Cecil Watson, who had a profound influence on him. Watson emphasized a careful, systematic approach to the study of the liver, and introduced Gerry to the concept of a battery of liver function tests called hepatograms. This approach was entirely new and it appealed to Gerry, for back at Yale only serum lipids and proteins were thought to be useful. In 1946, he returned to New Haven intent on establishing a proper liver laboratory. With the support of his Chairman, Francis Blake, but with the outspoken opposition of his Laboratory Chief, John Peters (then, Mr. Metabolism), Gerry set about to gather equipment, having been expelled from Peters’ laboratory. Soon consults and requests for tests came pouring in, and even Peters, who didn’t speak to Gerry for two years, became impressed.

Gerry performed the first liver biopsy at Yale in 1947. The Pathology Department laughed at the miserable size of the specimen and deemed this approach a failure. After a few false attempts and inadequate preparations, Hazel Hubbel, the Chairman’s technician, took over the project. She introduced Gerry to Carnoy’s fixative and the Massontrichrome stain. Later, Hazel joined the Liver Unit, and no tribute to Gerry would be complete without recognizing this unusual and dedicated woman. A “born scientist,” she was his equal for perfection. Because she abhorred automatic equipment, she handled the processing, including knife-sharpening by hand, for many years. Visitors to the Liver Unit from around the world came to pay her homage and to praise her work, but she never admitted to being pleased. Countless fellows became her staunch admires. With Hazel’s handiwork, Gerry combined his own keen interest in photography with the evolving art of liver biopsy preparation. The result, over a 35-year period, has been the accumulation of more than 50,000 Kodachromes from nearly 10,000 liver biopsy specimens. The Kodachromes, which are all correlated with detailed clinical data from each case, represent the largest personal collection of clinical pathologic correlations of liver disease in the world. A permanent library in Dr. Klatskin’s honor is currently being established for this collection.

This “pathologist’s pathologist” also earned the accolade of “the clinician’s clinician.” Early in his career he was given the title of DRD, “Doctor of Rare Diseases,” by Dr. Peters for the depth of his knowledge of esoteric as well as the more common clinical entities. His compulsive attention to detail is legendary. What one of his fellows does not recall Gerry uncovering a critical fact in a patient’s history or physical examination that had been missed by countless examiners before him, arriving at an entirely different and inevitably correct diagnosis, and then recounting from memory an encyclopedic background literature on the subject? An undiagnosed patient or a difficult management problem was presented and usually resolved by the “Klat” at his weekly consulting rounds. Gerry taught by example and demonstrated time and again the rewards of careful, critical attention to detail by the bedside.

Undoubtedly, the greatest beneficiaries of Gerry’s skills were the 47 postdoctoral fellows who came to train with him during the years between 1951 and 1978, and over the years, their accomplishments have been his pride and joy. He is fond of pointing out the values of an unstructured, broadly based training program. As the first recipient of a training grant in liver disease in 1959, he maintained this grant for 17 years. Despite the unstructured nature of his program, which often cast fellows adrift in the laboratory to sink or swim, 34 are employed in academic medicine, 19 are currently full professors, seven have become chairmen of departments, and one is a dean. Most are members of the American Gastroenterology Association and the American Association for the Study of Liver Disease. Three have been AGA councillors, and four are former presidents of the AASLD.

Throughout his career, Gerry has been relatively unaffected by the national and international recognition
that has come to him. He refused offers to move from New Haven, and successfully avoided additional administrative positions. Although he served as Acting Chairman of the Department of Medicine at Yale on four different occasions, he never wished to accept this responsibility permanently, preferring instead to pursue the interests that he loved the best.

Nationally he has served on several important committees, including the Gastrointestinal Nutrition and Liver Disease Training Committees of the National Institutes of Health between 1959 and 1964, and the Surgeon General’s U.S. Army Medical Research and Development Command from 1965 to 1975. He is a member of the American College of Physicians, the American Association of Physicians, the American Association for the Study of Liver Disease, and the Interurban Clinical Club, serving as president of the latter two organizations in 1958 and 1966, respectively.

Many honors have come his way, including (at Yale) the David Paige Smith Professorship, the Francis Blake Award for Outstanding Student Teaching (he was the first recipient), and the Mastership and Distinguished Teacher Award from the American College of Physicians in 1974 and 1979.

He has a daughter, Jane, who is a lawyer in Washington, and three grandchildren, all Danes; a daughter, Ann, a graduate student in computer sciences; and a son, Robert, an electrical engineer in Los Angeles at the Howard Hughes Aircraft Space Program. His wife, Lynn, who is here today, has recently retired from her own distinguished 37-year career at the Yale Child Study Center, where she was Professor of Psychology.

Gerry’s many scientific and scholarly accomplishments are well known and include the first demonstration that viral hepatitis and the Australian antigen were associated with chronic hepatitis (1); the identification of birefringence of protoporphyrins in liver biopsy specimens (2); the beneficial effects of alcohol withdrawal on the natural history of alcoholic liver disease (3); the prognostic significance of acute liver cell injury in hepatitis (4,5); definitive evidence for an association between halothane and hepatitis (6); the clinical significance of granuloma in liver biopsies (50 percent of the world’s published literature on this subject comes from his own material) (7,8); recognition that cholangiocarcinoma presents as a bile duct bifurcation tumor (so-called Klatskin’s tumor) (9); recognition of the common association of fever with Laennec’s cirrhosis (10); recognition that alcoholic hyperlipemia precedes and may precipitate episodes of pancreatitis; the design of an effective liver biopsy needle (the Klatskin needle, although he never received royalties); and many other clinical and scientific observations that he and his fellows pursued.

It has been said that the essence of a great man is the lasting impressions of his students. Dr. L. Frederick Fenster, Clinical Professor at the University of Washington, summarized his impressions four years ago on the occasion of a festschrift where his fellows honored Gerry, and I quote some of these:

“The Klat is warm, unassuming, and totally unpretentious. Affable, garrulous, and good-humored, his story-swapping (more accurately described as story-telling) abilities are almost legendary. He combines complete intellectual honesty and scientific skepticism with a voracious curiosity and almost unbelievable thoroughness. Who else, when titillated by anew problem or question, would write or call every known source of pertinent information, read every relevant paper in whatever language, review every pathology specimen (and take photos of each), and end up by being one of the world’s experts on the subject, simply because his curiosity would allow no other course of action? In the (50) years he has been at Yale, Gerry Klatskin has become an institution within an institution, an internationally famous physician. But at Yale, he has remained comfortable, intrinsic, and truly at home. At Yale he is, like jaundice itself, a natural phenomenon requiring no apology. He is unchangingly an essential structural and functional element of the institution.

“Gerry Klatskin has been a tremendous positive influence on all of us. Just as he has always taken satisfaction in our accomplishments, we have been proud to have studied under his direction. He has been, in this academic world of verbiage, a unique example of how to educate by example. He is the best in his field, still unspoiled and unchanged by his international stature.”(11) *

In conclusion, let me add my own personal reflections, which I know to be shared by many others. For myself, he has provided, above all else, an unparalleled model of excellence. No matter what activity he is involved in, he has demonstrated time and time again the rewards of meticulous attention to detail and the importance of pursuing scientific truth for its own sake and for the joy that comes from new discoveries, whether these be made from a careful history or physical examination, or by analyzing specimens under a microscope, or basic work at the laboratory bench — knowledge and truth for their own sake and for no other. It is perhaps for this reason, most of all, that the American Gastroenterological Association honors Dr. Gerald Klatskin today, on the 50th anniversary of his distinguished medical career. Gerry, will you please come forward to accept the Julius Friedenwald Medal?

*References on request from Yale Medicine
can then be made within hours, or at the most a day. A specimen of biotin-tagged blood, urine or tissue from a patient will be applied to the cards. If the specimen indicates the presence of the disease strain, and diagnosis can be made. Alternately, the "known" genetic material known to be associated with a specific disease, a diagnosis can be made. When rapid treatment can make a significant difference in the outcome, Dr. David Ward, professor of human genetics and molecular biophysics and biochemistry, has developed a modified nucleotide technology to provide more rapid and accurate diagnosis of viral, bacterial and fungal infections, as well as for the detection of certain genetic disorders.

The invention involves modified nucleotides or "tagging" molecules, called biotins, which mimic the natural nucleotides of DNA or RNA. They are incorporated enzymatically into portions of genetic material taken from blood, urine or tissue samples from the patient and then detected by interaction with proteins that bind specifically to such modified nucleotides. If that material is matched with other genetic material known to be associated with a specific disease, a diagnosis can be made. Alternately, the "known" DNA could be tagged with biotin and a match could be attempted with a patient's sample.

For practical application of this technique, Dr. Ward and his colleagues are developing small cards lined with spots of DNA from a number of specific viral, bacterial or fungal strains. A specimen of biotin-tagged blood, urine or tissue from a patient will be applied to the cards. If the specimen hybridizes to one of the spots, the spot will change color, indicating the presence of the disease strain, and diagnosis can then be made within hours, or at the most a day.

In addition to significantly reducing the amount of time necessary for accurate diagnosis, it is anticipated that this new methodology will replace procedures currently in use in biomedical research that rely heavily on the use of radioactive material. Although it can be applied to DNA methods for the isolation of genes, the new technique is not based on recombinant DNA technology, and cannot be characterized as genetic engineering, according to Dr. Ward.

Research which may open an entirely new approach to treatment of multiple sclerosis is in progress in the laboratory of Dr. J. Murdoch Ritchie, Eugene Higgins Professor of Pharmacology. He has recently been awarded a grant by the National Multiple Sclerosis Society to study the biophysical basis of nervous dysfunction in demyelinating disease.

Dr. Ritchie has developed techniques for measuring ion channels in the surface membrane of nerve fibers. Each ion channel is specialized to permit the passage of only one type of ion, either sodium or potassium. As a message moves along a nerve fiber to a muscle, it is activated by a movement of sodium, which enters the nerve fiber through a sodium channel, and by a movement of potassium as it goes out through a potassium channel. These channels open and close at strategic moments. In order to prepare nerve fiber for the next message, another structure in the fiber membrane, the sodium-potassium pump, carries the sodium out and the potassium in, between messages. This three-way cycle appears to operate for every message transmitted in the nervous system.

In multiple sclerosis, patches of inflammation form in the brain and spinal cord, eventually causing the protective myelin sheath surrounding nerve fibers to break down, thus interrupting nerve transmission. In previous work, Dr. Ritchie demonstrated that when the myelin is damaged or lost, the number of potassium channels increases, spreading into other parts of the nerve fiber surface membrane. His current research involves new methods to ascertain the exact changes in the numbers of these channels when myelination begins in the course of nervous system development; when demyelination occurs under various experimental conditions; and when myelin regenerates, as it sometimes does. He will then relate these changes to changes in the function of the nerve fibers.

According to the National Multiple Sclerosis Society, this research may provide the key to one approach to multiple sclerosis therapy — that of generating conduction of nerve impulses in the permanent absence of myelin.

A team of Yale specialists are performing cochlear implant surgery followed by extensive rehabilitative therapy to enable profoundly deaf persons to hear. The collaborative program of the Section of Otolaryngology at Yale and the Rehabilitation Medicine at the V.A. Medical Center in West Haven is funded by a grant from the Veterans Administration.

Candidates for cochlear implantation are persons who have become deaf in both ears after they have learned language, and for whom the use of a conventional hearing aid is of little or no benefit. Cochlear implantation followed by extensive audiologic and speech therapy enables them to distinguish male and female voices, certain environmental sounds such as sirens and bells, and some simple words. Although it does not enable them to understand speech, there is evidence that the device improves the patients' ability to read lips, and enables them to monitor their own voices. According to persons who have received implantation...
therapy, among the most positive aspects are an increased
sense of security and independence.

The cochlear implant system is comprised of a microphone,
signal or voice processor and transmitter, external and
internal coils, and active and ground electrodes. The
microphone, placed at ear level, picks up sound and carries
it to the signal processor which is worn on the body. The
sound is processed and transmitted to an external coil which
is held in place behind the ear by magnetic attraction to an
internal coil which is implanted under it in the mastoid
cavity. The signal is magnetically induced across the coils
and carried down the electrodes from the internal coil into
the inner ear. The procedure to implant the internal coil in
the inner ear is similar to other techniques of ear surgery
which present relatively little risk.

Approximately 18 million people in the United States
have some degree of hearing loss; and nearly one out of
every 100 has severe to profound deafness. In 1989, the
estimated cost to the nation for the education, care and
compensation for the deaf was $100 million. This amount
may have doubled since then.

There are two types of deafness: conductive or middle ear
deafness, and sensorineural or nerve deafness. During the
past 30 years, the development of microsurgical techniques
has enabled otologic surgeons to treat all forms of conductive
deafness. However, the majority of hearing impaired Ameri¬
cans have nerve or sensory deafness, and until recently there
has been no treatment for this type of hearing loss.

The cochlear implant procedure and therapy is carried
out at the V.A. Medical Center. The team includes Dr. Jaclyn
B.R. Spitzer, assistant clinical professor of surgery (otol¬
aryngology); Dr. Frederick Richardson, associate professor
of medicine, neurology and pediatrics, and chief of Rehabili¬
tation Medicine Services at the V.A. Medical Center; Dr.
Linda J. Gardiner, assistant professor of surgery (otolaryn¬
gology); Dr. J. Cameron Kirchner, assistant professor of
surgery (otolaryngology), and Dr. Clarence T. Sasaki,
professor of surgery (otolaryngology), and chief of the
Section of Otolaryngology. The cochlear implant device was
developed by the House Ear Institute in collaboration with
the 3-M Company.

The U.S. Public Health Service has termed Acquired
Immune Deficiency Syndrome (AIDS) a “public health
problem that merits the highest level of concern” and has
made it a top priority. Last year, recognizing a need for
specialized attention for patients with AIDS, a group of
health professionals at the Yale-New Haven Medical Center
representing physicians, nurses, social workers, religious
ministries, infection control and public health administrators,
began meeting as a multidisciplinary team to coordinate the
care provided to these patients.

An outpatient clinic was opened in early June to evaluate
the vast numbers of “worried-but-well” persons with early
signs and symptoms of AIDS, and persons with well-defined
cases of AIDS. In the past six months, the clinic has had
approximately 170 patient visits, most of whom have signs
and symptoms of the disease. The clinic also provides
follow-up care for patients who have been hospitalized. In
September, the Hospital employed Jeannee M. Parker,
R.N., M.P.H., as an AIDS program coordinator to serve as
liaison to all hospital departments caring for AIDS patients,
and to be a consultant to community organizations with

concerns about the illness.

Despite the number of patients affected by AIDS there
are few clues to indicate the etiology of this complex illness,
or what treatment modalities may be the most successful. As
a result, investigators are pursuing a number of approaches.

Dr. John Dwyer, associate professor of medicine and
pediatrics and chief of the Section of Clinical Immunology
has implanted thymic tissue, removed from infants under¬
going open heart surgery, into the muscle tissue of the
forearm of AIDS patients. It is hoped that this new tissue
will stimulate the production of T-lymphocytes in these
immunodeficient patients. Although the procedure is new to
patients with AIDS, it has been successful in patients with
other immunodeficiency syndromes.

Using a variety of laboratory techniques, Dr. George
Miller, John F. Enders Professor of Pediatric Infectious
Disease, is conducting research to identify and characterize
viral agents associated with AIDS and Kaposi’s sarcoma,
which occurs in its highly malignant form in 30 to 40 percent
of AIDS patients. With his colleagues, Dr. Warren Andiman
and Dr. James Robinson, he will conduct thorough diag¬
nostic virology studies on AIDS patients, especially children,
in an attempt to isolate viruses from hematopoietic elements
and other affected tissues. Further, they will attempt to

establish cell lines from tissues of AIDS patients and to
take these cell lines for cell of origin, presence of viruses, viral
nucleic acids, or viral-specific antigens; also to transmit
AIDS agents in vitro to primary and continuous hematopoietic
cell lines of man and subhuman primates. They will also
attempt to determine whether cytomegalovirus alone, or in combination with other viruses isolated from AIDS
patients, will transform morphologically human endothelial
cells or monocyte cultures in vitro.

In another study, Dr. Peter Tattersall, research scientist in
the Department of Human Genetics, will develop a mouse
model to study parvoviruses as a possible cause of AIDS. It
has been suggested that the severe T-lymphocyte depletion
which underlies Acquired Immune Deficiency Syndrome
may be the result of infection with a human T-cell-tropic
parvovirus, acting in synergy with a state of lympho¬
proliferative stress. To test this hypothesis, a mouse analog
of AIDS will be sought, using infection with MVM(i) in
conjunction with T-cell activators such as mitogens, viruses
or allogeneic cells, to produce a profound T-cell depletion.
The research team working with Dr. Tattersall will also test
the implications and predictions derived from this model
system for human AIDS.

The recent development of endoscopic, non-surgical tech¬
niques such as extracorporeal shock wave lithotripsy,
percutaneous ultrasonic nephrolithotripsy, and transurethral
ureterorenoscopy, have greatly improved treatment of renal
and ureteral stones. For the past two years, Dr. Bernard
Lytton, professor of surgery (urology) and chief of the
Section of Urology, and his colleagues have been treating
patients with two of these relatively new techniques, percu¬
taneous nephrolithotripsy and transurethral ureteroreno¬
scopy, with promising results.

Percutaneous nephrolithotripsy is performed in collabora¬
tion with Dr. Morton Glickman, professor of diagnostic
radiology, who first cannulates the renal collecting system
with a long fine needle under radiographic control, using
fluoroscopy. A guidewire is inserted through the needle into
the renal pelvis and over this, a small catheter is placed into the renal pelvis. The following day, this tract is dilated up to about 10 millimeters in diameter and a small cannula is inserted into the renal pelvis. A specially designed nephroscope and other instruments can then be passed easily into the kidney so that calculi can be visualized and removed. Small stones are removed with grasping forceps or a basket, while larger calculi are disintegrated with a special ultrasonically powered probe which incorporates a suction device to remove the fragments. Harder stones may require electrohydraulic disintegration. Staghorn calculi occupying the entire collecting system have also been successfully removed.

In the second technique, the ureteroscope is passed through the urethra and then directly into the ureter to visualize stones. Small stones are extracted with instruments under direct vision; larger stones have been disintegrated by an electrohydraulic shock wave generated by an electrical discharge at the tip of a special small electrode passed through the instrument. These procedures are generally performed under spinal or epidural anesthesia.

To date, 80 of the 100 patients with renal or ureteral stones at Yale have been successfully treated with one or the other of these techniques. In addition to the success rate, the pain and discomfort of stone removal is significantly decreased as there is no incision, and hospital stay and convalescence time are markedly reduced. It is probable that approximately 70 to 80 percent of all kidney and ureteral stones requiring removal will be treated by these nonsurgical techniques.

A new surgical approach to the treatment of malignant ventricular arrhythmias was introduced at Yale last summer by Dr. Alexander Geha, professor of surgery and chief of the Section of Cardiothoracic Surgery, and his colleagues. It has already benefitted a number of patients suffering from recurrent sustained and medical refractory ischemic ventricular tachyarrhythmias.

Each year, approximately one million Americans die of cardiovascular disease. About two-thirds of these deaths are due to cardiac disease, and half of this group die suddenly. Presumably, a major portion of the victims of "sudden death" have suffered abrupt ventricular tachycardias. With increasing sophistication in emergency medical care and the rise in the use of cardiopulmonary resuscitation programs, the lives of many more heart patients are being saved.

Ventricular tachyarrhythmias are the result of either enhanced automaticity or re-entrant arrhythmia or both. Automatic arrhythmias are common following cardiac surgical operations and in the early period after myocardial infarction. They arise from cells in the specialized conduction system in the ventricle in response to factors such as hypoxia and ischemia, electrolyte imbalance, increased catecholamines and drugs. Automatic arrhythmias characteristically resolve when the enhancing stimulus is removed. Re-entrant ventricular tachycardia is most frequently associated with chronic ischemic heart disease and is encountered in those patients with previous infarction who present with syncope or "sudden death" since it may lead to ventricular fibrillation. It is referred to as malignant arrhythmia and can be induced in the electrophysiological laboratory by programmed ventricular stimulation. Surgery has proven feasible only for re-entrant ventricular tachycardia.

In patients with re-entrant ventricular tachyarrhythmias, programmed ventricular electrical stimulation provides a tool for diagnosis and evaluation of treatment. The inducibility of a ventricular arrhythmia by programmed stimulation is considered as evidence supporting re-entry as a mechanism for the arrhythmia. This is determined in the electrophysiological laboratory which, at Yale, is directed by Dr. William Batsford, associate professor of medicine. Based on electrophysiological studies, the patient is started on the antiarrhythmic agent which seems to be most effective; if pacing is indicated, an appropriate pacemaker is implanted.

In 10 to 30 percent of patients with malignant ventricular arrhythmias, however, an antiarrhythmic regimen and/or pacing prove ineffective. These patients become candidates for surgical therapy, prior to which they undergo more detailed electrophysiologic evaluation including endocardial mapping of both ventricles during induced ventricular tachycardia to locate the site of origin of the arrhythmia. This is done by catheter mapping of various sites in both ventricles to find the earliest site of electrical activation during ventricular tachycardia or to locate a site of continuous electrical activity close to the area of old infarction. The origin of the refractory tachycardia in the majority of the patients is in the left ventricle. This preoperative mapping provides an indication of the approximate location of the short-circuit responsible for the re-entrant mechanism.

The surgical approach in these selected patients was developed three years ago at the University of Pennsylvania and Duke University and was brought to Yale by Dr. Geha. The operation requires cooperation of the electrophysiologic and surgical teams in the operating room to achieve accurate direct epicardial and endocardial mapping during induced ventricular tachycardia in the open chest. By slipping a ring electrode on the index finger, the surgeon makes an electrical map of the outside of the heart as it beats, looking for the area of short circuit. With the use of the heart-lung machine, the heart is then opened through the scar of the old myocardial infarct and a detailed map of the inside of the heart is made, far more detailed than Dr. Batsford and his associates are able to make with an electrode catheter preoperatively.

The area identified by surgical mapping as responsible for the short circuit is often located on the inside of the left ventricle, adjacent to the grossly scarred heart muscle, and often appears normal to the naked eye. Once identified, it is removed, and other mechanical defects in the heart wall, such as an aneurysm, and or valvular dysfunction are corrected. When necessary, a coronary bypass operation is also performed to improve the blood flow to the heart muscle itself.

The results of the electrophysiologically directed endocardial excision in the patients treated at Yale have been very gratifying. No patients have had spontaneous sustained ventricular arrhythmias after the operation. The Yale surgical team had previously studied and reported their experience with patients having refractory ventricular arrhythmias and previous documented infarction, who were treated by coronary bypass grafting and/or aneurysmectomy, as well as correction of other mechanical defects when present. In that group of patients, 19 of 26 long-term survivors continued to have spontaneous recurrent ectopy after the operation; the introduction of mapping-guided endocardial
excision marks the only change in the surgical procedures and has accounted for the abolition of spontaneous recurrent ventricular tachycardia in the recent group of patients.

Again, the operation is an intricate one and depends upon close cooperation between the surgical and electrophysiological teams. The electrophysiologists record the map obtained by the surgeons and interpret it on the spot, in order to localize and remove the small mark in the heart wall which is causing the runaway beats.

Within the last several years, critical but previously unrecognized metabolic functions of the pulmonary circulation have been described. Dr. C.N. Gillis, professor of anesthesiology and pharmacology, and his colleagues are studying the physiological and pathophysiological roles of these processes.

The metabolic functions referred to are the uptake and catabolism of vasoactive hormones and drugs by the pulmonary microvasculature. In particular, we have studied the fate of circulating vasoconstrictor hormones, including catecholamines, 5-hydroxytryptamine and prostaglandins. During their passage through the pulmonary microvasculature, many of these substances are removed to such an extent that very little survives to reach the systemic circulation. Thus, it seems one function of the lung is to prevent these potent vasoconstrictor hormones, which may be released on the venous side of the circulation, from reaching the systemic arterial bed, where they may have deleterious effects.

Much of this metabolic activity is now known to occur in endothelial cells of the pulmonary microvessels. Since these cells are also known to be injured early in disease processes leading to acute respiratory failure, a current interest of Dr. Gillis' laboratory is the measurement of these processes in the intact animal, or in the patients, to determine whether such processes are altered in advance of clinically detectable Acute Respiratory Distress Syndrome (ARDS).

They have established that in experimental lung injury, caused by high inspired oxygen tensions, endotoxin administration or embolization, there is a diminished metabolic capacity of pulmonary endothelial cells; furthermore, this is evident at a time when no discernible morphologic change, indicating injury, can be seen. At the clinical level, they have also established that there is a significant decrease in the ability of the pulmonary circulation to take up and metabolize prostaglandins in patients suffering from acute respiratory failure.

From this and related work, it may be possible to develop methods for the early detection of the endothelial injury. If successful, the latter effort may yield a method to predict impending ARDS at a time when treatment of this very serious and life-threatening situation may be initiated earlier and therefore be more effective.

Research in the laboratories of Dr. Joan Steitz, professor of molecular biophysics and biochemistry, and Dr. John Hardin, associate professor of medicine (rheumatology) is aimed at understanding the cause of systemic lupus erythematosus (SLE). A highly complex inflammatory disease that strikes mainly young women, SLE often causes a skin rash and arthritis, but may affect any organ.

Despite its clinical variability, the occurrence of antinuclear antibodies (ANA) has been recognized as a nearly universal feature in virtually all affected patients. Although there are many different types of ANA, they can each be identified from the particular structures (antigens) to which they bind. In recent years it has become increasingly important to understand which types of ANA are present in individual patients. Some of these antibodies, such as the one known as anti-Sm, have extremely good correlations with the diagnosis of SLE. Others, such as anti-native DNA, have special roles in causing tissue injury. Since ANAs are such a characteristic feature of SLE, it is reasonable to believe that whatever mechanism leads to their production has a great deal to do with the cause of lupus.

The work at Yale concentrates on understanding the structural and biochemical features of the molecules that become the targets for ANA. Their studies have demonstrated that some of these antigens are located on the polypeptide components of ribonucleoprotein particles that have roles in gene expression. Others are located on segments of histones, that are exposed within the structure of chromatin. Presently, the investigators are looking for common denominators among all of the many different components of the cell nucleus that could explain why a relatively select group of these structures begin to act as autoimmunogens in patients with lupus. If these factors can be identified, they hope to understand the cause of lupus. For similar reasons they are also interested in understanding how the ANA found in SLE compare with those found in patients with other rheumatic diseases such as rheumatoid arthritis, drug induced lupus, scleroderma, or inflammatory muscle diseases. Presently each of these latter diseases appears to have its own characteristic set of ANA.
A new kind of medical scientist has been emerging over the past decade, and they are already making their mark on the quality of medical care service in this country. At the mid-century, it had become evident that health care delivery was becoming increasingly complex and physicians were needed who were skilled not only as clinicians but also had the analytical capabilities to examine a broad range of health care problems. In 1973, to meet this challenge, the Robert Wood Johnson Foundation established its Clinical Scholars program.

Based on programs started in several medical schools during the late 1960's, it offers twenty young physicians each year the opportunity for two years of graduate-level study and research in non-biological disciplines such as clinical epidemiology, law, economics or behavioral sciences, which influence medicine and health affairs. The Foundation currently funds six such programs in medical institutions throughout the United States. Some graduates of the program have become involved in developing and managing a variety of health care institutions and delivery systems; others are contributing to the formulation, conduct and evaluation of public policy issues in the health field.

Yale was one of the first schools to receive a grant to establish a Robert Wood Johnson Clinical Scholars Program, and it soon became recognized as one of the leaders. As stated in the recruitment brochure, its purpose is to "develop a new breed of investigative scholarly clinicians concerned with challenges in the strategies, delivery systems, and policies associated with patient care.”

The four scholars enrolled each year come from a variety of backgrounds and are either Board eligible or Board certified physicians. Although they are encouraged to maintain their clinical and patient-care interests, it is expected that during the two-year program, their primary interest will be the educational and research activities of the program.

Dr. Alvan Feinstein, professor of medicine and epidemiology, has been the program’s director since the beginning. Regarded by colleagues and scholars alike as a superb, provocative and demanding teacher, he organized and formulated its basic philosophy, and does a large share of its teaching.

The original goals for the Yale program included plans for recruiting talented scholars; assembling capable faculty; developing an effective core curriculum in the methodology of research; providing suitable attention to medically related issues of social science; and supplying supervision, stimulation and assistance to the scholars during the research portion of the program. The basic mechanisms for accomplishing these goals were set in place when the program began in 1974, and most of them have been maintained with relatively few substantial changes, according to Dr. Feinstein.

The curriculum for the program includes a core course in quantitative clinical epidemiology for the first year scholars, and seminars in health policy and delivery conducted by invited lecturers as well as by the faculty, for both first and second year scholars. These seminars cover a wide range of subjects such as health manpower legislation, various facets of medical ethics, malpractice, and the economics of medicine. Scholars are also encouraged to take selected elective courses offered in the Department of Epidemiology and Public Health, the Child Study Center, the Institution for Social and Policy Studies and the Law School. The second year is devoted almost entirely to the design and completion of an original independent research project, using skills developed in the program.

Clearly the clinical epidemiology course is the keystone of the Yale Clinical Scholars Program. Developed by Dr. Feinstein specifically for the scholars to provide them with the skills necessary for managerial decisions of patient care and other activities in the delivery of health care and in health policy, it has since served as a model for programs in other medical schools, and a Clinical Epidemiology Section was established at the annual joint meeting of the American Federation for Clinical Research, American Society for Clinical Investigation and the Association of American Physicians.

The principle of clinical epidemiology is the application of basic science and epidemiologic research techniques, and when appropriate, economic and sociologic data skills, to areas that are of primary concern to clinicians. The course consists of four main components: data processing, computer orientation, research design, and biostatistics. It has proven to be a highly effective way to provide clinical scholars with critical exposure to the general methods of epidemiology, biostatistics and computers, while at the same time, developing new methods of evaluating and advancing specific aspects of the conventional methods that are pertinent to their clinical concerns.

"To my knowledge, the Yale program is the one that focuses most clearly on the original purposes of the Robert Wood Johnson Foundation, which is to train academicians and investigators in the techniques of clinical research,” said Dr. James F. Jekel, C.E.-A.
Dr. Feinstein, Winslow Professor of Public Health, who has been on the Clinical Scholars Program faculty since 1975. "There had been no clear track for people who wanted to do clinical research. For the most part, they stumbled into it either by working in a research laboratory, or by taking part in an epidemiologic study in a school of public health, and then making the transition to clinically oriented techniques."

Traditionally, it had been thought that clinical data couldn't be used for science unless they were quantitative. "One of Dr. Feinstein's most significant contributions to medical science has been to insist that clinical phenomena and clinical data are scientifically very important, and he has demonstrated this in a number of studies, such as those he conducted on the prognosis of cancer patients and patients with a history of rheumatic fever," according to Dr. Jekel.

Dr. John Leventhal, associate professor of pediatrics and the Child Study Center, recently received a grant from the Robert Wood Johnson Foundation to study the effects of home glucose monitoring on diabetic children and their families. A graduate of Tufts School of Medicine, he trained in pediatrics at Yale for three years before entering the Clinical Scholars Program in 1976 to further his interest in doing research in childhood behavioral problems, child abuse and chronic childhood illness. He has received several grants for research projects in these areas since completing the program. The disciplines and skills he acquired as a scholar have enabled him to design more effective protocols for these studies, he said, especially in areas such as choosing patient populations and formulating research strategies.

But the program isn't only tailored to those interested in clinical research. Dr. Lolita M. McDavid is a second year scholar interested in health policy and planning administration. "It was made very clear to me when I was interviewed for admission that the strength of this program is in clinical epidemiology," she said, "but I decided that the kind of skills I would learn here would serve me in better stead than would programs in other schools that were strong in health policy."

The wife of a bank vice-president and mother of a three-year-old daughter, she describes herself as a "bent arrow" who received a B.A. degree in political science and history, an M.A. degree in public administration, and who worked as an administrator for several years before entering Case Western Reserve University School of Medicine in 1975. She was a resident pediatrician at The Cleveland Clinic Foundation when she applied to the Robert Wood Johnson Clinical Scholars Program.

"This program gives you a very solid background in making your point," she explained. "For instance, most people in health policy and planning have backgrounds in sociology, or psychology, or public health. They often have difficulty in firming up their plans because they don't have the tools. You get those tools in this program."

Although the scholars come from a variety of backgrounds and have interests as diverse as religion and ethics, and health policy and planning, most have had experience in the real world of medicine. Returning to an academic environment has rewards and a few frustrations.

"It's a radical change from residency, where one tends to work 100 hours a week and is entirely immersed in patient care," admitted Dr. Dale Matthews, a first-year scholar whose interests are rooted in medical ethics and physician-patient relationships. A cum laude graduate of Princeton University where he majored in romance languages, he received his M.D. degree from Duke University and did his internship and residency in medicine at the University of Connecticut Health Center. "The balance here is completely different. I see patients one or two half-days a week, and do some teaching of nursing and medical students, but its quite a change from my previous medical experiences. In many ways, the first year is like going back to college, in that course are structured, there are assignments, and then there is time for reading and reflection."
Dr. Leventhal mentioned it, and others have confirmed that designing and completing the research project is perhaps the most difficult part of the two years. “It’s a curious paradox. The program is very structured during the first year, yet at the same time, we are expected to develop a research project primarily on our own.” Dr. Matthews explained. “I have found that among our own group, each of us is his own worst enemy — pushing himself harder than our instructors are pushing us. To decide what we want to investigate, and then do it without anyone telling us we have to do it, or how we must do it, or when to do it, is an important step in our careers that is unlike anything in medical school or residency training.”

Through the ten years of the Yale Clinical Scholars Program a camaraderie has been established not only between scholars in the same year, but between all graduates of the program. Underlying this is a sense of gratitude for the opportunities the course offers, as well as a sense of respect for the faculty and their values. Often mentioned are Dr. Ralph Horwitz, co-director of the program, who was one of its first graduates, and is now head of the Section of General Medicine, Dr. Jekel, the assistant director, and Dr. George Silver and Carolyn Wells, who have been with the program since it began. Dr. Feinstein, though, merits their special admiration.

“I compare this program to the Harvard Business School,” said Dr. McDavid. “They recruit people who are good, and then give them skills that others in their field don’t have. They also give them the imprint of being Harvard Business School graduates, and for the most part, they excel,” she explained. “In the same way, the Yale Clinical Scholars leave here with the skills and the tools, as well as with a built-in support system of having Yale and the Robert Wood Johnson Foundation behind them.”
NEW DIRECTOR APPOINTED FOR CANCER CENTER

Dr. Alan C. Sartorelli, chairman of the Department of Pharmacology, and a leading cancer investigator, has been appointed director of the Yale Comprehensive Cancer Center. Dr. Sartorelli, who is head of the Developmental Therapeutics Program of the Center, has been its deputy director since 1982. He succeeds Dr. Jack W. Cole, Ensign Professor of Surgery, who has been director since 1978.

“We are looking forward to continuing our work in areas of cancer research and patient care as well as serving the needs of the people of Connecticut,” said Dr. Sartorelli. “The Yale Comprehensive Cancer Center is one of 20 Comprehensive Cancer Centers in the country, as designated by the National Cancer Institute. One of Yale’s unique strengths is the Department of Pharmacology, which develops new drugs or drug combinations to be used in treating cancer. These new therapies are rapidly moved into clinical practice through sections such as Medical Oncology, where patients are being treated with some of the most advanced drugs,” he explained. “Another important program of the Cancer Center is the Department of Therapeutic Radiology, headed by Dr. James J. Fischer, which combines basic research in radiobiology and radiologic physics with radiotherapy in one of the best and most advanced treatment programs in the nation. The Center also serves as the focal point for cancer information and education throughout the State by interacting with community organizations, such as the American Cancer Society, hospitals, physicians, nurses, social workers, dieters, and the general public.”

Dr. Sartorelli, who received his Ph.D. in biochemical oncology from the University of Wisconsin, has been a member of the Department of Pharmacology at Yale since 1961; he was promoted to professor in 1967, and named chairman of the Department in 1977. The author of over 400 publications, he is executive editor of *Pharmacology and Therapeutics* and regional editor for the American continent of *Biochemical Pharmacology*. He has been a director of the American Association for Cancer Research, a member of the Board of Scientific Counselors of the Division of Cancer Treatment of the National Cancer Institute, and a member of the Council for Analysis and Projection of the American Cancer Society.

In addition to Dr. Sartorelli’s appointment, Marion E. Morra, communications manager, has been named to the new position of assistant director of the Cancer Center. Dr. Joseph R. Bertino, chief of the Section of Medical Oncology, and Dr. Sherman M. Weissman, professor of human genetics, medicine and molecular biophysics and biochemistry, and head of the Molecular Virology Program at the Center, will continue in their present positions as the Center’s associate director for clinical science and associate director for basic science, respectively.

TWO ON FACULTY RECEIVE AWARDS FOR RESEARCH IN THE NEUROSCIENCES

Dr. Pasko Rakic and Dr. Elias Manuelidis are among the first research scientists to receive the Javits Neuroscience Investigator Awards of the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS). The award, passed by a 1984 Act of Congress to honor Senator Jacob K. Javits of New York, recognizes NINCDS grantees who have achieved a distinguished record of contributions in the field of neurological and communicative sciences, and who can be expected to be highly productive over the next seven years.

Dr. Rakic, who is the Dorys McConnell Duberg Professor of Neuroscience and chairman of the Section of Neuroanatomy, received a grant of $1,500,000 for seven years for research on the neurogenetic processes in the fetal brain. A leading scientist in brain research, he is best known for his investigation of neuronal maturation, as well as for research on the development of the visual system and cerebellum in primates. His work has important implications for investigation of the interaction of genetic and environmental factors governing human behavior and intelligence, as well as for understanding neurological diseases. A native of
Yugoslavia, he came to Yale in 1978 from the Harvard Medical School, where he had been on the faculty since 1972.

NINCDS awarded Dr. Manuelidis, professor of neuropathology and neurology, almost $1,200,000 for seven years to continue his well-known research on Alzheimer's disease. Internationally recognized for his studies of dementias, Dr. Manuelidis and his colleagues are among a small group of scientists working on the hypothesis that Alzheimer's disease is caused by a slow-virus of the type recovered from brain tissues of victims of the fatal but rare form of dementia, Creutzfeldt-Jakob disease. Their work involves comparison of the mechanisms and progress of Creutzfeldt-Jakob disease in laboratory animals with changes seen in patients with Alzheimer’s disease and other forms of senile dementias, in an attempt to understand the course, and eventually, the cause of the disorders. A native of Greece, Dr. Manuelidis was director of the Pathological Anatomical Laboratory of the German Research Institute of Psychiatry, Section of Brain Pathology at the Kaiser Wilhelm Institute before coming to the United States and to Yale in 1951.

**EDUCATIONAL FUND ESTABLISHED IN THERAPEUTIC RADIOLOGY**

The Daniel S. Kapp Educational Fund for Therapeutic Radiology has been established by a gift from Mr. and Mrs. Gordon B. Tweedy of Brewster, New York. Mr. Tweedy is a member of the Class of 1929 at Yale College and received his law degree from the Yale Law School in 1932.

The Fund, which honors Dr. Daniel S. Kapp, associate professor of therapeutic radiology, will establish a permanent endowment, the income from which will be used to bring distinguished scientists and clinicians to Yale as visiting lecturers in the field of therapeutic radiology. It is anticipated that there will be several visiting lectureships each year.

“We are extremely grateful to Mr. and Mrs. Tweedy for establishing The Daniel S. Kapp Educational Fund at Yale,” said Dr. James Fischer, professor and chairman of the Department of Therapeutic Radiology. “One of the major needs of our department has been a source of funds to bring outstanding individuals to Yale to lecture in the field of therapeutic radiology. The need has been met by this generous gift which honors our colleague, Dr. Kapp.”

The Yale Department of Therapeutic Radiology has established a reputation worldwide for leadership in research, patient care and teaching. One of the first departments in the United States to be designated in 1960 by the National Cancer Institute as a radiation therapy-radiobiology research center, it has continued to make major contributions to improved treatment methods used in radiation therapy centers throughout the country, including the Hunter Radiation Therapy Center at Yale, which is one of the largest and most up-to-date in the U.S.

Dr. Kapp received his B.S. and M.S. degrees in physics from Polytechnic Institute in New York, and his Ph.D. and M.D. degrees from Stanford University. He was a resident in therapeutic radiology at the Stanford University Medical Center from 1973 to 1976, when he was appointed assistant professor of therapeutic radiology at Yale. In 1980, he was appointed chief of Gynecologic Radiation Therapy, and in 1982, he was promoted to associate professor. Dr. Kapp returned to Stanford University School of Medicine in January as associate professor in the Division of Radiation Therapy.
NEW HAVEN COUNTY MEDICAL ASSOCIATION CELEBRATES ITS BICENTENNIAL

By David Musto, M.D.

The New Haven County Medical Association came into being just months after the Definitive Treaty of Peace was signed with Great Britain in September 1783. Called together at the historic coffee house on the east side of the Green in New Haven (where the post office now stands), the Association was formally organized on January 5, 1784 and chose as its first president, Dr. Eeverett Hubbard, a man destined in 1792 to become the first president of the Connecticut State Medical Society.

Dr. Hubbard spoke to the Association on February 2, 1784 in a brief statement which encompassed much of medical philosophy and the practice of medicine. He pointed out that although we are all the same as regards the parts of our bodies, we differ greatly in temperament, and this difference in personality must be taken into account by the physician. This sensitivity to the patient's needs is the theme which was emphasized at the bicentennial convocation on March 22. Dr. Hubbard concluded his observations by expressing the hope: "May the blessings of heaven ever attend this society, that peace, brotherly love and knowledge in the art of healing may flourish so as to exceed any of the renowned societies of the same denomination in Europe."

Whether the New Haven County Medical Association has exceeded all the renowned societies of medicine in Europe may be open to dispute, but that later members of the society did indeed distinguish themselves in the development of medicine, there is no disagreement. One of the members, Dr. Jonathan Knight (1789-1864) was a leader in the formation of the American Medical Association in the middle of the last century, and Dr. Worthington Hooker (1806-1867) is now recognized as a major pioneer in the field of medical ethics with his sensitive analyses of the mutual rights of patient and physician. Dr. Hooker was also a prolific author of children's textbooks on science and nature, and one of New Haven's elementary schools is named after him.

Furthermore, members of the County Society were among the founders in 1810 of The Medical Institution of Yale College, and exercised authority over the School jointly with Yale College until 1884. The distinguished history of the County Association is preserved in records which exist without a break back to the first meeting in 1784. An extensive exhibit on its history, displaying many of the Association's and Yale's treasures in the history of medicine is on view in the Yale Medical Library until June.

PROGRAM FOR HUMANITIES IN MEDICINE

The School of Medicine recently received a grant from the Connecticut Council for the Humanities in support of a new program for humanities in medicine. Directed by Dr. Howard M. Spiro, professor of medicine, the program is presenting a series of twelve semi-monthly lectures throughout the spring and fall to bring together scholars in the humanities and members of the medical profession in discussions about the influence of the arts and letters on medicine and health.

Speakers include Dr. Robert Coles, professor of psychiatry and medical humanities at Harvard University; Arnold Rampersad, professor of English at Rutgers University; Arthur Caplan, associate for the humanities at the Hastings Center; and Dr. Martin Carey, associate professor of medicine, physiology and biophysics at Harvard University. They will discuss topics as diverse as the physician as a writer; the effects of health and well-being on art and vice versa; ethical issues in organ transplantation, and creativity and illness.

The purpose of the series, according to Dr. Spiro, is to encourage medical students and professionals to expand their definitions of health and disease through a better understanding of the cultural and intellectual influences on health and well-being, as well as to stimulate scholars in the humanities to take a greater interest in health related issues. The lectures are open to the public without charge.
Dr. Luke Kitahata received a fellowship from the German Academic Exchange Service for collaborative research with Professor Manfred Zimmerman of the University of Heidelberg. They have conducted a study of the effects of microinjection of morphine sulfate in the brainstem on dorsal horn neurons of the lumbar spinal cord, and clarified some of the important mechanisms of morphine analgesia. Dr. Kitahata, professor of anesthesiology, was chairman of the Department from 1973 to 1982.

The American College of Physicians has awarded the Willard O. Thompson Memorial Traveling Fellowship to Dr. Caroline Riely, associate professor of medicine and pediatrics, for research on liver disease in children. She will spend six months at l'Hôpital d'Enfants in Bicetre, France studying biliary atresia, a liver disease attributed to arrested fetal development, which has an unusually high incidence in the Bicetre area.

The Japan Society for the Promotion of Science has awarded the fellowship to Dr. Ethan Nadel, associate professor of epidemiology (environmental health) and physiology. As a fellow, Dr. Nadel will spend a month in Japan for discussion and observation, as well as to deliver lectures and participate in seminars. Dr. Nadel, who is an associate fellow of the John B. Pierce Foundation Laboratory, is known for his studies on factors contributing to the regulation of the circulatory system in humans under stressful conditions such as heat or exercise.

Dr. John Hobbins, professor of obstetrics and gynecology, has been elected vice-president of the American Institute of Ultrasound in Medicine. The chief of the Section of Perinatology at Yale-New Haven Hospital, he has played an important role in the development of ultrasound as a tool for perinatal diagnosis and for the monitoring of fetal growth and development. Dr. Frederick Kremkau, associate professor of diagnostic radiology, has been elected to the board of the American Institute of Ultrasound in Medicine.

Dr. Alan Gurwitt has been appointed to the editorial board of the International Journal of Psychoanalytic Psychotherapy. Co-editor of "Father and Child: Developmental and Clinical Perspectives" (Little, Brown), he is an associate clinical professor of psychiatry (Child Study Center).

The National Academy of Practice in Social Work has elected Audrey Naylor, a Distinguished Practitioner. An assistant clinical professor in the Child Study Center, Ms. Naylor is the author of two books and numerous articles on social work. One of nine academies representing various aspects of health care, the National Academy of Practice in Social Work was founded recently by leaders in that field.

At the 93rd meeting of the Horace Wells Society, honoring the discovery of anesthesia in the United States, Dr. Paul Barash was presented the Award of Merit for outstanding contributions to the field. Dr. Howard Smith, '53, clinical professor of surgery and president of the society, presented the award, following opening remarks by the chairman of the board of trustees, Dr. Wilbur Johnston, '37. Dr. Barash, who is professor and chairman of the Department of Anesthesiology, delivered a talk on "Cocaine in America: 1984."

Dr. Leonard Kaplow has been elected president of The Histochemical Society and will assume office in April. He is professor of pathology and laboratory medicine, and chief of Laboratory Service at the Veterans Administration Medical Center in West Haven.

Dr. Paul H. Duray, instructor in pathology, presented a talk on "Pathology of Synovitis in Lyme Disease" at the meeting of the International Academy of Pathology, held in San Francisco in February.

NEW BOOKS BY FACULTY


The fourth edition of "Principles of Surgery," published by McGraw-Hill Book Company (New York) is dedicated to Dr. Edward H. Storer, one of the associate editors, "Whose contributions to surgical physiology and education constitute a lasting legacy. Whose efforts related to 'Principles of Surgery' contributed significantly and eased the editorial process throughout the production of four editions." Dr. Storer, professor of surgery and associate dean, died in February 1983.
ALFRED GILMAN, Ph.D.

Dr. Alfred Gilman, an internationally recognized medical scientist, author and authority in the field of pharmacology, died suddenly at his home in New Haven on Friday, January 13, 1984.

He was born in Bridgeport, Connecticut on February 8, 1908 and in his 75th year was actively engaged in writing and in lecturing at Yale and in numerous advisory capacities. After graduating from Yale College in 1928 and being awarded a Ph.D. degree in biochemistry from Yale University in 1931, he served as a research fellow and, from 1935, as assistant professor of pharmacology and toxicology at Yale until he left for Army service in 1943. He served as chief of the Pharmacology Section of the Medical Division with the rank of major.

In 1946, he was appointed to an associate professorship in pharmacology in the Columbia University College of Physicians and Surgeons in New York City, and became a full professor there in 1948. He held this position until 1956, when he accepted the chairmanship of the Department of Pharmacology at the newly established Albert Einstein College of Medicine in New York City. There he also served as associate dean for graduate studies. On his retirement from this position in 1973, Dr. Gilman and his wife returned to New Haven, where as a professor emeritus from Albert Einstein College of Medicine, he volunteered his services to teach in the Yale School of Medicine.

With the title of lecturer in pharmacology, he taught with singular effectiveness until his death. Indeed, on the very day he died he was to have delivered the concluding lecture in the pharmacology course, a lecture devoted to an overview of drug therapy, past-present-and future, which he was uniquely qualified to deliver and which had become something of an annual event — awaited eagerly by students and faculty alike.

All recognized his great stature in the field and his ability to captivate his audience by wisdom, force of argument, and obvious dedication to the discipline of modern pharmacology which he had done so much to develop. His ability to fire the enthusiasm of the medical students and young doctors for the rational use of therapeutic drugs was remarkable. But this was only one facet of his many contributions to medicine.

Dr. Gilman's most influential contribution to medical science was his authorship in collaboration with Dr. Louis S. Goodman, of a landmark textbook, first published in 1941, that was to revolutionize the teaching of pharmacology and the perspective of generations of physicians. This text, The Pharmacological Basis of Therapeutics, was at once recognized as an astonishing tour de force. It not only presented a treasury of pharmacological facts, but it organized these within a novel framework where they were interwoven, in a unique manner, with current biochemical and physiological knowledge and with pathophysiological and clinical concerns so that the whole provided a refreshingly rational basis for drug therapy. One reviewer, in 1941, surely echoed the general view when he wrote that the text was "the kind of work that might have been the fruit of the collaboration of a team of authors, and it is difficult to think how two men did it." From today's perspective, with this now classic textbook soon to enter preparation for the seventh edition — and long since "multi-authored" — the accomplishment is even more remarkable and the great impact of the work on the field of pharmacology and on clinical medicine is universally acknowledged.

In addition, Dr. Gilman contributed importantly in several fields of biological experiment. His early studies illuminated the osmotic relation between blood and body fluids and led him, eventually, to a series of outstanding works on renal pharmacology. In the interim, in the 1940's, he published extensively and authoritatively on the newly developed organophosphorous anticholinesterases, and with his colleague, Louis Goodman, was responsible for the clinical introduction, in 1946, of the first effective cancer chemotherapeutic agent, nitrogen mustard.

He also served at the national level as a valued consultant and advisor to various governmental agencies and committees, as well as to industry and many private foundations. Thus he played a key role in governmental review of drug efficacy, serving notably on the Drug Research Board of the National Academy of Sciences, of the National Research Council, from 1963 to 1972, latterly as chairman.

Dr. Gilman received many honors as a result of his remarkable professional achievements and contributions. He was elected to the presidency of the Society for Pharmacology and Experimental Therapeutics (1960) and to membership in both the American Academy of Arts and Sciences and the National Academy of Sciences, and he was awarded the degree of D.Sc. from Dartmouth in 1979.

Alfred Gilman's great stature and authority in the field of pharmacology never eroded his modest character nor the gentleness, patience and understanding with which he advised and encouraged the many who sought his help. A revered teacher, colleague and friend has been lost, but the splendid influences of the man on so many aspects of medicine will persist.

Dr. Gilman is survived by his wife, the former Mabel J. Schmidt of Bridgeport, whom he married in 1934, by two children, Dr. Alfred G. Gilman, chairman of the Department of Pharmacology, University of Texas Health Science Center at Dallas, and Joanna Gilman Feins of Hingham, Massachusetts, and by five grandchildren. W.W.D.
The Alumni in Medicine Column

Notes from the President

Nicholas P. R. Spinelli, M.D.

It's cool and comfortable in Howard Levitin's office on this suffocatingly hot August day. The Office of Student Affairs, 1983, is quiet and free of the usual noise and bustle during this holiday period. I glimpse Dean Betsy Winters at her desk, her door always open, as I cross the foyer into Dr. Winters at her desk, her door always open, as I cross the foyer into Dr. Levitin's office. I try to recall the administrative wing of 1943 when I was a student. Was it "suffocatingly hot" in those days before air-conditioning? My memory fails at recollection; it rejects the recall of discomfort and distress, a guileful trick of senescence. I have passed the door which belonged to Miss Dasey who, unappointed, was the student-advocate-confidante of my day. Was she indeed unappointed, serendipitous in this role? I do not know. She was the Registrar in an immensely simpler administrative structure, in an immensely simpler time. Her eyes twinkled. It felt good to talk with her. Dean Winter's role is, indeed, more structured and defined. But like Miss Dasey, her performance has become a legend among medical students of her time. "She can do anything. Bring her the most incredible idea or problem. She comes up with a solution." "She's the most compassionate, sensitive person you could know. She listens."

Dr. Levitin's office is unpretentious and functional, as pragmatic as the dozens of daily dialogues with students must be. The pictures of the student body are prominent on his office wall. It reveals this man's concern for his team, of the multifaceted mission with an experienced, practiced layman to physician is an additional burden for our students."

Howard Levitin came to Yale as a fellow in metabolism in 1956 (one of the salt/water boys of the post-Peters era). I remember him coming to give CME lectures on "salt and water" at my community hospital 20 miles away, our Yale faculty consultant. His student affairs role emerged a decade later and has grown to its present status. "I was from New York but went to Southwestern Medical School in Dallas," he recalls. "It was traditional, not as emotionally binding as Yale. We had a Miriam Dasey... a Betsy Winters... her name was Ann Rucker." One readily perceives New Haven, not Dallas, dominates the commitment of this man today. What I hear as I talk to him is a description of student development in this modern time of vastly increased knowledge and technology, a more stressful reality than we older alumni knew. "We ask that they be mature in their crises, but they are as scared as we were," notes Dr. Levitin. "What did we do, how did we cope in our less stressful time?" I ask myself. My answer seems valid; that during World War II the forced communality of life of the 40's (Company C, Yale Unit, Howard Avenue) forced us to be our own support system. We turned the absurd pressure of that time, the war, into a form of catharsis, sharing, interpersonal challenging which helped disperse anxiety. Our emotional needs and conflicts were dealt with in an ad hoc fashion, with no structured system. Today's support system must be thoughtfully structured to meet this essential need. It is one of many megabudget medical school items.

My nagging notion that somehow as alumni, we might be of help to the students with this same process of emotional support, through communication as alumni, continues to fail to materialize. Neither students nor alumni, in the end, have the time which can be structured socially to achieve this end. Yet I am continually amazed by how extraordinarily gratified those students would be to share the fact that there is a universality about student anxiety, no matter what the time setting, that the pain of today's suffering to acquire personal achievement dissipates with the healing touch of time.

"Those of you who have been there, who are there, can describe the directions which we are still not able to see. Direction is what we need." He is an eager, earnest, third year student who is interested in plastic surgery. I can easily arrange an appointment with an experienced, practiced plastic surgeon I know. As alumni, we can be of help in many such ways. We must continue to pursue the means to do so.
1925
Our appreciation to Paul Saffo (33) for sending us news about Howard Wood who resides in Torrance, California. Dr. Wood left private practice 12 years ago, but retired just last September when he resigned his position as physician for the Torrance Unified School District. He became 90 in January, and in addition to a birthday celebration by the students of the Howard A. Wood Elementary School, he was honored by the Torrance Kiwanis Club for four decades of community service. As noted in an article in the local newspaper, “Daily Breeze”, he is probably best remembered as the motivating force behind the creation of an independent city school district for Torrance almost 40 years ago.

1932
“Health Care in China”, an AMSA study tour of the People’s Republic of China, June 19 - July 7, will be led by Myron Wegman. The American Medical Student Association is sponsoring this as a part of its medical education program. Dr. Wegman, dean-emeritus of the University of Michigan School of Public Health, is president of the American Association for World Health. His connections with China began in 1972, when he chaired a Conference on Public Health in the People’s Republic of China, co-sponsored with the Center for Chinese studies and the Josiah Macy Foundation, and was co-editor of the book that resulted from the conference. As a member of the National Academy of Sciences-sponsored Committee on Scholarly Exchange with the People’s Republic of China, he was a member of the first medical delegation to the People’s Republic of China, in 1973. Dr. Wegman was appointed to the Committee on Advanced Study of China in 1978 and visited China again with the CASC subcommittee in 1979 to arrange long-term placement for the first group of Americans to do advanced study and research in China since the establishment of the People’s Republic.

1933
Robert Huntington spoke at the Fourth International Conference on Coccidioidomycosis held in San Diego in March. His address entitled “A Modern View of Coccidioidomycosis From a Personal Historic Perspective” was one of the highlights of the scientific program. The conference was organized under the auspices of the American College of Chest Physicians.

1938
Announcement was received in February that Charles Petrillo has moved from New Haven to new offices in Guilford, Connecticut for the practice of ear, nose and throat diseases.

1953
William Whalen is president of the newly organized Connecticut Peer Review Organization (CPRRO). Unlike most physician review programs, CPRRO includes representatives of both the providers (physicians and facilities) and the payors (business, industry and insurance carriers). Dr. Whalen is also president-elect of the Connecticut State Medical Society and is currently chief of the medical staff at Windham Community Memorial Hospital in Windham, where he practices surgery.

1954
In October Robert Joy gave the eighth annual Joseph Garland Memorial Lecture of the Boston Medical Library. Dr. Joy, professor and chairman of medical history at the Uniformed Services University of the Health Sciences, spoke on “Health Reform in Nelson’s Royal Navy.” The lecture honors the memory of Dr. Joseph Garland, who was editor of The New England Journal of Medicine from 1947 to 1967.

1958
Michael Kashgarian is currently serving as president of the Yale-New Haven Hospital Medical staff.

1960
Festus Adebonojo, professor of pediatrics at Cornell University Medical College, has been named professor and chairman of the Department of Pediatrics at Meharry Medical College School of Medicine in Nashville, Tennessee.

1968
John Ogden, who has been on the faculty at Yale since 1972, has been appointed professor of orthopedic surgery at the University of South Florida College of Medicine in Tampa.

1969
Lee Jampol, professor of ophthalmology at University of Illinois College of Medicine, has been named professor and chairman of the Department of Ophthalmology at Northwestern University Medical School in Chicago.

1971
H. Steven Moffic and his wife, Rusti, were among 23 American academicians awarded fellowships by the American Jewish Committee to attend the annual Academician’s Seminar in Israel in December. Dr. Moffic’s research interest is ethnic identity, and on his return, he wrote two short pieces for the seminar’s journal on “Singing for the Scholars: the Yiskor Service at Yad Vashem”, and “From the Ivory Tower to the Dead Sea: the Genesis of a Seminar”. Dr. Moffic is associate professor of psychiatry at Baylor College of Medicine.

1974
In a note received in November Isaac Hoch and Jane Snyder Hoch said that they “will be moving to Israel this December to participate in the development of family medicine in Israel and will be affiliated with the Department of Primary Care at Ben-Gurion University of the Negev.” They also wrote that they have been in private practice in Northampton, Massachusetts since 1978, have three children and are expecting their fourth in April.
1977
Harvey Berger has been named director of the Nuclear Medicine Division and Magnetic Resonance Research at Emory University School of Medicine in Atlanta, Georgia.

1978
The American Academy of Pediatrics announced last fall that Elizabeth Hodgson has been elected to fellowship in the Society. Dr. Hodgson is on the staff at Athens General Hospital and at St. Mary's Hospital in Athens, Georgia. The Academy, an association of physicians certified in the care of infants, children and young adults, has 25,000 members in the United States, Canada and Latin America.

1980
Holiday greetings from Steven and Lisa Rosenfeld (PH '79) included the additional news that they became the proud parents of a baby boy, Michael, last July. They are residing in St. Louis, Missouri.

PUBLIC HEALTH

1965
Viola Spinelli, formerly vice president for operations at Bridgeport (Conn.) Hospital, has been named senior vice president, with responsibility for overseeing and supervising all the institution's major operations. Miss Spinelli held the position of associate administrator of the Tufts New England Medical Center in Boston before joining Bridgeport Hospital in 1977.

1969
Susan Addiss became president of the American Public Health Association in November of 1983. As a member of the APHA, Ms. Addiss has served as Action Board chairperson, as a Governing Councilor, as a member of nominating and awards committees, and has testified before the U.S. Congress on important health-related matters.

She is chief of the Connecticut Department of Health Services Bureau of Health Planning and Resource Allocation; her responsibilities include conducting Connecticut's health planning activities and implementing the state health plan. Ms. Addiss also holds teaching appointments in Epidemiology and Public Health at Yale, and in Community Medicine and Health Care at the University of Connecticut Medical Center.

INFORMATION REGARDING CHANGES IN CLASS AFFILIATION

Medical graduates and Public Health graduates are assigned to a Class based on the year in which the degree is earned, or would have been earned in those cases where the work is not completed. Under special circumstances, and by written request, alumni may affiliate with another Class for reunion and fund-raising purposes. Such affiliations will be made only when an alumnus has interrupted or extended the program of study and graduates in a year other than the year of graduation expected at the beginning of studies.

Requests by alumni/ae for changes in Class affiliation may be submitted to: Alumni Records Office, P.O. Box 1950 Yale Station, New Haven, Connecticut 06520.
An exciting program has been planned for the Medical Alumni Weekend to be held this year on June 7, 8, and 9. In addition to the outstanding academic seminars and traditional, and always popular social events, this year's program will include a presentation by Dr. Howard Hamilton, Class of 1944, of Japanese Noh Theater.

The oldest continually extant theater in the world, Japanese Noh was perfected in its present form about 500 years ago. It is a symbolic, non-realistic, poetic monodrama with origins in ancient Japanese and Chinese dance and religious ceremony. Noh is performed by elegantly costumed actors, often masked, on a unique stage devoid of realistic scenery or properties. The highlight of the drama is a stylized dance section of minimum movement and spare gestures. The poetic imagery of Noh ranks with the best of Japanese literature. Strictly maintained performing traditions are passed down through succeeding generations by hereditary Noh Schools.

In the mid-18th century, five Noh Schools were officially recognized by the Tokugawa regime. The Kita School was established around 1618. Dr. Hamilton began studying Noh on his arrival in Japan in 1956, under the tutelage of Izumo Tsunekazu, a certified Master of the Kita School in Hiroshima. He has also received instruction from several masters of the Kita School in Tokyo, as well as instruction in musical aspects of Noh from the former head of the Morita Noh Flute School.

Playing leading roles, Dr. Hamilton has performed in 30 full-length Noh dramas in Hiroshima and Tokyo, as well as in the annual three-day Noh Festival at the Shrine on Miyajima Island. He is the only non-Japanese actor to appear in Noh Drama on the 450-year old stage of the Shrine. In addition, he appears in six to eight Kita recitals annually, and has appeared in several television performances in Japan. In this country, he has given a series of lectures and demonstrations in art galleries and on college campuses.

Dr. Hamilton's performance on Alumni Weekend will be presented by the Class of 1944 at 4 p.m. on Saturday, June 9, in Fitkin Amphitheater. All alumni and their guests are invited to attend, but advance registration is required.
HIGHLIGHTS OF MEDICAL ALUMNI WEEKEND

Friday, June 8

10:00-4:00  Medical School Student Affairs Office Open House
1:30       Class of 1944 Reunion Seminar
2:30-3:45  Yale Alumni in Surgery Seminar
4:00-5:00  Edward Storer Memorial Lecture
8:30-4:30  Yale Alumni in Ophthalmology 1984 Annual Meeting
8:00       Yale School of Nursing Annual Alumnae/i College
9:00-4:45  School of Nursing Alumnae/i Seminars
8:30-9:30  AYAPH and YUHAAA Annual Workshops**
9:45-11:30 AYAPH and YUHAAA Joint Session
5:00       Alumni Reception to Honor Dean and Mrs. Robert W. Berliner

**Association of Yale Alumni/ae in Public Health (AYAPH)
Yale University Hospital Administration Alumni Association (YUHAAA)

Saturday, June 9

9:15-9:45  Remarks by A. Bartlett Giamatti, president of Yale University
9:45-4:00  Yale Alumni in Otolaryngology Reunion
10:00-11:45 Alumni Seminars
11:45-12:30 Annual Meeting of the Association of Yale Alumni in Medicine
12:30-2:00  Sherry and Buffet Luncheon
2:00       Seminar “Health Care Marketing”
4:00       Japanese NOH Drama Theater Performance and Lecture*
5:00       Reception Honoring Dean Donna Diers, School of Nursing

*Advanced registration required
ALUMNI WEEKEND
JUNE 7, 8, 9
ALWAYS GREAT,
WILL BE EVEN GREATER!

DON'T MISS IT...
Commencement Address 1984, by George Palade, M.D.

How Does the Brain Work? By Nissa Simon

Perfecting Organ Transplantation by Polly Carter

In Progress

A Tribute to Dean and Mrs. Berliner

Here and About

President Giamatti Announces $125 Million Campaign

Alumni News

Class of 1984 Postgraduate Appointments (inside back cover)

COVER: The task of studying and understanding how the human brain works has confounded and fascinated scientists for centuries. (The diagram of brain cells by Fludd on the cover and page 5 illustrates a 17th century attempt.) Techniques and instrumentation developed only in the last decade have opened vast new areas for studies on this basic machinery of human behavior. The article beginning on page five describes four scientists who are using these tools in outstanding research to find answers to questions that have baffled scientists for centuries.
Forty-five months ago, I had the pleasure of being the first member of the faculty of this medical school to give you a formal lecture in the first course of your curriculum. It was an introductory lecture to Cell Biology. And now, I am, at your request, the last faculty member to address you the day you are leaving your medical school to begin stepwise progression through the second half of your training, through internship, residency and laboratory work towards your final positions within the medical community of this country.

Of course, this day is not the end of your efforts to learn whatever is needed for your demanding profession. But it marks the end of a significant phase, the one in which a foundation was laid (in reasonably logical fashion) to allow you to understand the reasons behind specific disease cases that you’ll have to diagnose and manage, as well as the knowledge of the day will make it possible. More importantly, it is also the foundation over which new layers of knowledge should be added through the years of your career, as work in biomedical sciences will continue to progress.

Since advances in this field have proceeded at a spectacular rate over the last few years, the foundation was intended to be broad and solid, relevant not only for the medicine of today, but also — if possible — for that of a number of years to come. While that foundation was under construction, you may have had questions about the relevance of some of its building blocks. But you may have second thoughts about this issue a few years from now. In any case, you should realize that your alma mater might suffer severe mental pains if, in the future, your patients may know more than you do about some basic aspect of their condition, because they read about it that day in the New York Times, or even their local newspaper, — because your foundation was not broad enough, or because you didn’t have a chance to read about that specific issue in The New England Journal of Medicine. Remember that the publication lag in the New York Times is much shorter than in any properly edited medical or scientific journal. So, relevance in the past, the present and especially the future should be considered on a safely broad basis.

But now, leaving this question aside, let’s consider first your past experience and then your future:

You handled bravely the mountains of information of the first year and a half of your curriculum. Even if predigested and neatly packaged, those mountains generated rushing torrents of letters and words that could have flooded your minds, and scrambled them forever, but they didn’t; you survived the acid test of the fourth semester of the curriculum, when weaker souls would have collapsed under the weight of the triple demands of the Pathophysiology course, the first round of board examinations, and especially the second year show;

you went successfully through your clerkships;

you made smoothly that critical transition from well-worn casuals to ties — nice ties — and jackets — impeccable jackets — (or their feminine equivalents);

you looked carefully at your image as reflected in the eyes of your patients, your residents and your faculty, and adjusted the source of the image in the right direction, whenever adjustment was needed.

And now, 45 months later, and, I would say, 40,000 read pages later, you are ready to face the world as medical doctors. However you look at it, and notwithstanding any touch of slight irony, it has been a great performance. You are fully entitled to be proud of it. You deserve the unreserved congratulations of your faculty, your younger and older colleagues, and
especially of your families. But what about the future?

Are you entering your profession under the fog of stagnation, or the clouds of doubt and uncertainty? Or are you becoming medical doctors at a time when promise of progress and, with it, promise of great professional rewards, are to be found right around the corner, past your entry into the field?

The answer to this question is undoubtedly the brightest part of the entire picture. You should consider yourselves unusually fortunate. In fact, you should congratulate yourselves for the excellent timing of your graduation.

If the primary objective and the major source of satisfaction of a physician, practicing at whatever level fate places her or him, is to cure or prevent diseases, especially incapacitating, painful, destructive diseases, you are entering the ranks of your profession when there is finally hope that we’ll be able to control at least some of these diseases in your lifetime, perhaps even during the first ten to twenty years of your professional activities. Over the last century, especially over the last fifty years, your predecessors were able to solve the awesome problem of infectious diseases with such success that Homo sapiens moved all the way from the position of an endangered species, endangered by the major epidemics of the past, to that of a species that has overpopulation problems, and thereby damages in part the environment and threatens most of the rest of the biosphere. The problem of infectious diseases is, generally speaking, solved, although some remaining pockets are still awaiting practical solutions.

Today, however, we are finally closer than ever before to a precise understanding of neoplastic diseases in molecular terms. And this is a major achievement. We are finally seeing the morbidity and mortality curves for cardiovascular diseases coming down at an unexpectedly rapid rate, primarily because of improved management; we can detect many inherited metabolic diseases in time to avoid many unnecessary familial tragedies; and given time and a better organization of our society, we could eliminate at least part of these inborn metabolic diseases.

Moreover, our rapidly advancing understanding of the organization and control of expression of eukaryotic genes, including our own, and the biotechnology developed during these advances, makes possible the development of new, highly refined diagnostic and prognostic tools that will greatly improve the management of many diseases and the prevention of many genetic disorders. Similar tools may also help us in controlling whatever problems we still have with infectious diseases.

Biotechnology may even make possible gene therapy, that dream of the over-optimistic and most venturesome among us. But you should realize that cell therapy may also become a valid alternative, provided that in the meantime, we learn more about the complex and remarkably resourceful system that governs our immune reactions.

So, with all these facts and promises in mind, I believe that you should raise a toast today to the timing of your graduation — two glasses of good champagne are definitely warranted. But before having the third glass, however, you should pause and consider that, in fact, not all the dragons and nightmares of human pathology are on the verge of being tamed, conjured or dissipated. Between what we know and what we would like to know in medicine there is still a gap. In some cases, that gap is as big, wide and dark as the Grand Canyon early in the morning when most of its depth is shrouded in darkness. In that black abyss we can place schizophrenia and the degenerative diseases of central nervous systems of all ages, especially the old.

At this junction, I would like to turn for a few minutes autobiographical because I need a part of my story to make a point. As you probably know, my formal training was in medicine, but as you probably do not realize, I went through the equivalent of a complete internship and residency program before going back to the laboratory.

At the beginning, I liked the heroics of medical care in major emergency cases, and the challenge of great responsibility put on my rather young shoulders. I had no problems during a year in infectious diseases, primarily because I realized that there was hope of improvement. I did reasonably well through two years of internal medicine, but towards the end, I started having doubts about the future. And I didn’t like at all a year in neurology because I saw too much despair and too little hope.

So, I went back to internal medicine, in which I functioned for a year or so as an assistant professor, and during that period I became progressively uncomfortable about the gap between what I knew and what I had to know to live up to the expectations of my patients. They expected me to speak with the authority of an oracle, but not withstanding my efforts and many books, my authority rested on a very modest bank of significant information. So, in the late 1930’s, when sulfonamides had already emerged as the new miracle drugs, but before antibiotics entered the scene, I left internal medicine and moved back to a laboratory.

No mouse, rat, guinea pig or rabbit was going to ask me, “Doctor, are you sure of your diagnosis?” — or — “Is this treatment of yours the best there is for my condition?” And no mouse or guinea pig was going to embarrass me more seriously by telling me, “Doctor, I am so happy to be in your hands, because you know so much about my condition.”

It was not really giving up medicine, it was going back to the scientific foundation of medicine and trying to do something about that disturbing gap. By a series of unusually happy circumstances (for which I was not directly responsible), I was able to contribute reasonably well to the new field of cellular
biology, which soon turned cellular and molecular biology, and rapidly became the common ground or the starting line for many other fields of biomedical interest. You may know that neurobiology in our school is now cellular and molecular, — that many other institutions have cellular and molecular immunology, and that pathology and even medicine are becoming cellular and molecular. There is even a Journal of Molecular Cardiology on the market!

However, were I a member of your graduating class, my decision would not be so easy. I would consider very seriously medical practice, academic medicine, and especially clinical research because:

we know today so much more than 40 or 45 years ago;

at present, our knowledge in biomedical sciences is so much deeper and coherent than it was in the late 1930's;

our diagnostic and therapeutic arsenal is so much more powerful and extensive — it covers, in fact, a very large sector, if not the whole front, of clinical sciences:

and especially because basic research, directly relevant to human diseases, can be carried out successfully on cells taken directly from human patients afflicted by hematologic, immunologic, and neoplastic disorders. This kind of work may soon become possible in other fields of clinical interest.

We can come back now to the excellent timing of your graduation and examine more critically some relevant issues.

The timing is so much better than that of many of your predecessors, because they brought the biomedical sciences up to the level from which you are starting. They provided you with a high and firm base line, which is the way it is because under it are buried the shoulders of Hippocrates, Galen, Maimonides, Pasteur, Erlich, Osler and those of legions of more recent doctors and surgeons, even the shoulders of most of the members of your faculty.

You are the beneficiaries of a long ascending road that brought us all the way from prehistoric witchcraft to the medical sciences of today. As any other beneficiaries, you should consider yourself in duty bound to sink, in time, your shoulders under the same baseline to raise it even higher and make it even firmer for the classes of the late 1990's or the early 2,000's.

But, before sinking your shoulders under the feet of future generations, make sure that they are as hard as possible. No innocent youngster should sink while stepping on soft or mushy shoulders. Remember that we have narrowed the gap between what we know and what we should know, but we have not succeeded in closing it yet. Remember that there is still a wide gap in cardiovascular diseases, and a dark, huge chasm in many mental diseases. It may take many shoulders to fill that abyss, but there is no other way. I hope some of you will work on these gaps and, if you do, I wish you the best of luck.

Now, disregarding for the moment those gaps and those chasms, did I paint too optimistic a picture of the immediate future of your profession?

I really don't think I did.

Yet, I have to inject a few corrections because I feel they are needed. There are admittedly a few clouds on the horizon that deserve to be considered.

THE FIRST CLOUD: We find ourselves, at present, in a situation in which our inventiveness moves faster than the increase of our material resources. This is obvious in the case of the so-called half-way technologies. Renal failure requires sustained dialysis. Obstructive coronary arteriosclerosis is bypassed by vascular autografts, and organ transplantation is the object of considerable and general attention.

Yet most, if not all, of these procedures are palliatives, not cures. And none of them is inexpensive enough to be applicable or affordable in all cases, even if the society as a whole pays the expenses we are
moving toward different ways of management for the rich and the poor and the move is clearly undesirable. The problem is how to direct our attention away from mechanistic inventiveness toward basic research aimed at preventing such afflictions as kidney failure or arteriosclerosis in general. This becomes, of course, one more reason to concentrate on those gaps already mentioned.

THE SECOND CLOUD: We hear more and more often that patients are unhappy, although they receive in most cases good or excellent treatment, and although they live today longer than at any time in history.

Patients like to be treated as persons, to be the object of the visible attention of their physicians. They believe their doctors concentrate too much — sometimes exclusively — on the charts, numbers and molecules of the sick, rather than on their patients’ emotional whole. Not even the most intractably molecular biologist likes to be treated like a collection of molecules out of order when she or he is sick. And the same applies clearly for the most scientifically minded physicians when they become patients.

Medicine is often referred to as an art. And indeed, it shares with the real arts two major properties. Medicine can generate rewarding, even engrossing, results by skillfully handling ordinary, often uncertain, poorly defined elements, just like the arts. And, in the past at least, like all the arts, medicine kept man in the center field of its attention. But now, medicine seems to be pushing man as a whole, out of the limelight; it appears bent on replacing him by derivatives which are scientifically valid, but are perceived as cold, inaccessible abstractions by the sick, ordinary mortal. This dehumanizing trend is general and afflicts most severely the plastic arts.

The roots of this second fall from grace — this time on earth — can be traced to a misinterpretation of science. Slowly, over the years, we became aware that perhaps (and let me emphasize this perhaps, because I would not like to hurt the feelings of any believers among you) perhaps we are not the daughters and sons of Deity, or, in any case, the object of Its special attention. We are, it seems, the last primate species produced by evolution, big clever monkeys, but monkeys nonetheless.

Artists usually follow the major trends in the thinking of their times, but doctors should have their own, more lasting set of values. The theological record indicates quite clearly that as a species Homo sapiens is a specialist in recurrent failure. His record as the Son of God, which means the immediate product of absolute perfection, has always been questionable, often miserable.

But his prehistorical and historical record as a later times primate has been, and still is, unique and splendid, — unsurpassed and probably unsurpassable. For this reason alone he deserves to remain in the center of our field of attention — artistic, medical, scientific and otherwise.

Besides, this creature definitely needs constant attention. Moreover, through history, this kind of treatment has been the most powerful instrument in the betterment of the species.

So, as medicine becomes more and more of a science, it must retain this element of its art-like past. We have to find the means that will allow the physician to communicate with the patient as a person, dealing with another person badly in need of attention. Under this level of intense, unmitigated personal attention, the sick molecules of the patient must, of course, be treated with other appropriate molecules prescribed by the physician, but the patient as a person cannot be left out of the limelight.

THE THIRD CLOUD: The medical profession is acquiring a questionable reputation: it is becoming, on the average, an affluent profession and often likes the overt expression of its affluence — obtained, naturally, from professional fees.

In the Christian calendar, there are only two doctor-saints — Cosme and Damien. And they are there because they were taking care of their patients without requesting any fees. I am not suggesting anything as radical as that. But, after paying those huge debts (incurred while in medical school), could you think twice before buying a Mercedes Benz, a Jaguar or even a Cadillac, instead of, say, a Ford Escort or a Nissan Stanza? In our times, such means of ego gratification work only during the lifetime of the owner of the ego. Sometime ago they were admittedly supposed to work forever. But even if we would go back to those times, and even if we would be buried in our Mercedes Benzes, the archeologists of the next millennium may say, “What a clumsy, rudimentary machine we found in the tomb of that great doctor!” The long ships in which Viking queens and kings were buried a millennium before, or the chariots in which Sythian chieftains were put to rest even more millennia before, have at least the advantage of being highly esthetic objects.

And now we come to the end. You are leaving, taking with you the emotional equivalent of a few fibers from the heart of your alma mater, and, from your faculty, the emotional equivalents of such precious objects as sodium channels, signal recognition particles, snRNP, scRNP, TATA boxes or the latest membrane receptor.

Each one of you is a special person among all men and women.

Each one of you is a precious daughter or son of your alma mater.

Each one of you deserves a bright future.

Farewell, and out there remember to treat your patients as persons — remember the gaps and the chasms still to be filled, — and harden your shoulders for the sake of the future.
The brain — three pounds of tissue — more than 10 billion neurons — is ceaselessly active whether we are awake or asleep. Neurons, no one of which is exactly like another, are so intricate that each is connected to thousands of others by complex chemical processes and electrical circuitry. To function, these circuits depend on myriad channels — protein molecules that act as tiny valves to control the flow of electric current.

The task of studying and understanding such an enormously sophisticated organ is so staggering that it has long defied detailed analysis. But this basic machinery of human behavior is finally yielding its secrets.

New techniques and instrumentation developed in the past decade provide researchers with tools hardly even imagined when today’s freshly minted neurologists entered medical school.

At Yale, these tools are being applied by teams of researchers employing the collaborative efforts of experts in neurophysiology, neurochemistry, neuroanatomy, immunology and molecular biology. Contemporary neuroscience evolved into a multidisciplinary approach because the pursuit of these separate disciplines proved constraining to research.

All neuroscientists share the same general question: How does the brain work? But this one major question can be approached at many different levels.

Four researchers at Yale are looking for the answer in strikingly different ways. They are Patricia Goldman-Rakic, professor of neuroscience; Pasko Rakic, chairman of neuroanatomy and Dorys McConell Duberg Professor of Neuroscience; Charles Stevens, chairman and professor of molecular neurobiology, and George Aghajanian, professor of psychiatry and pharmacology.

The questions they ask and the techniques and methods adopted in pursuit of their answers may seem esoteric at first glance, but come together to have important therapeutic implications.

HOW DOES THE BRAIN WORK?
HOW DOES IT DEVELOP?
HOW DO THESE QUESTIONS RELATE TO BRAIN DISORDERS?
“People have been interested in the subject I’m studying — the cortex — for centuries. Scientists have been asking questions, but the answers have been unsatisfactory,” said Dr. Goldman-Rakic. “Progress was slow because we didn’t have good methods. But in the last decade, methods developed rapidly and as the methods get better, the questions get better and the answers get better. There’s been an enormous revolution in techniques: computers, sophisticated biochemical assays, sophisticated methods for analyzing connections in the brain.”

In very early stages of brain science, scientists thought the brain was one intermeshed network without breaks — that one cell and its process couldn’t be separated from another. In fact, the brain is made up of discrete units connected to one another. “This is the neuron doctrine, which is now 100 years old,” said Dr. Goldman-Rakic. “What is new is that now you can see each unit and actually trace the connections.

“The brain is the most complex structure in the universe,” she continued. “Every cell in the brain — and there are so many you can’t even imagine the staggering number — is connected to other cells by a most complex wiring system. Billions of individual elements communicate with each other in a complicated manner, but one that can be unravelled.

“When you use a microscope and biochemical methods and physiological techniques, you can dissect the brain into these elements. And these elements are the subject of our study.

“One step in unravelling it is finding out how the individual neurons are assembled and what kind of circuitry they form. This can be done now. It sounds a bit like science fiction, but it can be done in a way that was impossible even ten years ago.”

Dr. Goldman-Rakic is interested in the cerebral cortex, the region of the brain that controls thought and language, where information from our senses is analyzed, and where our body’s responses are determined. “You almost have to be a metascientist to be interested in the cortex because you can’t understand it without knowing its connection to other structures in the brain and other organs in the body, such as the circulatory system, endocrine glands and even the viscera. So you end up learning about these other structures, too,” she said.

One of Dr. Goldman-Rakic’s interests is studying the development of connections in the cortex.

“We want to know what happens to the brain from its earliest stages to old age,” she explained. “In both monkeys and humans, most of the brain’s developmental events take place before birth.” Dr. Goldman-Rakic studies the development of cortical connections in monkeys by injecting radioactive tracers into fetuses and then returning them to the womb where their development continues uninterrupted until delivery.

Her studies showed that cortical connections are surprisingly well-developed at birth. “I was surprised to see that. However, the connections aren’t fully developed because they continue to add outgrowths in the form of dendrites and axons. First a cell comes to be located in a specific place; then it sends out extensions to make contact with other cells in other places. And that process continues after birth. “But the basic blueprint is there. We can liken it to having a narrow footpath from A to B. Then, as the path is more travelled, it gets wider. Finally it becomes a road,” Dr. Goldman-Rakic continued.

Neuroscientists now believe that this process of maturing contacts is the neurological basis for learning and the development of skills. When a child speaks for the first time or walks for the first time, some of these connections have matured. “You’re born with all the neurons you’ll ever have,” said Dr. Goldman-Rakic. “Those cells then do a lot of growing up and getting educated. That’s what experience does; experience trains those cells.”

According to Dr. Goldman-Rakic, the critical event in the brain’s development is the establishment of a synapse, the point of connection between one cell
All scientists know that the process of discovery, the Eureka! factor, is built from days and years and decades of painstaking research, assembled bit by bit, equation by equation. But even the daily and weekly routine has its own appeal and excitement.

What's the most exciting part of your work?

Nissa Simon

The most exciting part of my research is gaining insight into a complex problem that I've been working on for a long time. You begin to think you'll never really understand it, then one day you get an additional bit of information that attaches to some other information that you have — and suddenly a new view opens up.

This is an intensely private experience. You can share it with other people afterwards. When you take them through that process vicariously, they may or may not realize how your knowledge developed. You, however, know how you started with nothing and came to something. Then when you have a new insight you realize how pitiful your previous understanding was. It's exciting to see that your understanding which was at first primitive, can be enriched and realize how your own efforts brought you to that understanding.

Dr. Goldman-Rakic
"There are three questions worth asking in neuroscience today," said Dr. Rakic. "How does the brain work? How does it develop? How do both of these questions relate to various brain diseases?"

"My research is concerned with finding answers to the second question: How does the brain develop?"

"The questions we’re asking have been around a long time,” he said, “but answers are possible now because of the explosion in new methodology. These new methods actually make it possible to trace the migration of neurons as the brain develops during gestation.

"Using DNA labeling, we determined the sequence of genesis of various cell classes in selected brain centers. We showed that all neurons in primates are generated only during limited periods," Dr. Rakic explained. "Unlike cells in other organs in our body, most brain cells are generated before birth. A few are added during the neonatal period — but not a single neuron can be added during adult life. Basically, we’re stuck with what we’re born with.

"In fact, we postulate that new neurons could interfere with the retention of previous experiences. Therefore, we think that a final set of neurons, a stable population of neurons, is essential for the primate brain to retain previous experience encoded in a synaptic pattern,” continued Dr. Rakic.

"We found that cells in primates, including humans, migrate long distances after they’re generated in utero,” he said. “While still in utero, they move from place of their last division to their final destination. That’s a delicate process that must be precise in terms of time and space. In monkeys this occurs about mid-gestation. But the brain is not formed, because during that period they must migrate to their final position. Then the process of formation of connections continues through the second half of pregnancy, after birth and during infancy. These migrating cells will later function as local circuit neurons in the neocortex.” When the cells arrive, their morphological, cytological, biochemical and physiological maturation continues; they still must develop connections and appropriate neurotransmitters.

In order to mediate behavior, cells must connect with each other in some way. “Our main problem is to define the rules that govern the formation of these synaptic connections in the brain,” said Dr. Rakic. “To what extent are they determined genetically? To what extent can they be modified by environmental factors such as training and experience?”

In the past, these connections were thought to be ‘hard-wired’, a phrase borrowed from computer science to describe structures that are genetically determined. “Now we know that the final synaptic pattern — at least in higher organisms, including primates — is highly variable and depends on many factors, including sensory experience,” said Dr. Rakic. Genetic information encoded in the DNA of individual neurons does play an essential role, but the innate blueprint can be modified by non-genetic factors. This interaction allows an immense structural variability in synaptic organization that may be the biological basis of our individuality and the single most significant reason for the evolutionary success of the primate brain.

“We had long suspected that the environment plays a role in the formation of neuronal connections. But it was actually demonstrated less than ten years ago,” continued Dr. Rakic.

“The way connections are made in the brain can be likened to sculpting a figure from a piece of stone,” he explained. Most neurons are overproduced during fetal life. Optic nerves, for instance, contain about three times as many fibers during mid-gestation as we will have as adults. This was initially discovered in the monkey and later found true of humans as well. Similarly, primates have 150 million fibers connecting the two halves of the brain at birth. During infancy, this number is reduced to the adult level of fewer than 50 million.

“There is an excess of material and the only way to refine it is by eliminating what is not needed,” said Dr. Rakic. He calls this process..."
'selective elimination'. "The brain is not formed by every neuron being programmed precisely to make contact with another neuron. Rather, there is an excess of neurons and their axons make the best connections by trial and error. Those connections that are functional and serve the individual best are reinforced and survive. Those that don't serve a purpose will disappear. It's rather like Darwin's theory of survival of the fittest: in this case, survival of the best connections in the brain."

Dr. Rakic believes that early training can play a significant role. "When you recognize that your child has three times as many axons as you have on the corpus callosum connecting the two halves of the brain, you realize that during those infantile years the environment determines which of these axons will survive and which will not. The environment includes education and training as well as the chemical environment, which includes drugs and nutrition," he said.

The implications of this research are great, because once we understand the development of the normal brain, we can also understand abnormal development — which occurs more frequently than suspected. "There are many subtle abnormalities that can't be detected by routine pathological examination. In our technological world, we are just beginning to assess the problems associated with external chemical and environmental influences on the brain." commented Dr. Rakic, "problems that our predecessors did not have."

Dr. Rakic recently received a telephone call from a member of the United Nations commission assessing physical consequences of the atomic blasts at Hiroshima and Nagasaki, almost 40 years ago. They were examining individuals who were fetuses when their mothers were exposed to the blast, yet were born and survived. He told Dr. Rakic that most of the survivors who suffered from mental problems were between ten and 17 weeks of gestational age at the time of the blast, and the commission wondered why.

"I said that coincides well with the time that the major wave of neuronal migration to the neocortex occurs. This wave contains the neurons that later form the local circuits that are responsible for higher cortical function," said Dr. Rakic. "Therefore, I could predict that they have problems of higher cortical function rather than sensory-motor problems. And that's exactly what happened to this group of survivors. Some cannot work, many of them don't have jobs, some of them are institutionalized. They don't have any problems with social adjustment."

Dr. Rakic suggested that perhaps their local circuit neurons didn't complete their migration to the cortex because of the radiation. They may have been stopped below the cortex. The United Nations scientists answered that they thought radiation could kill cells, but they didn't know whether it could stop cell migration once it was initiated.

"We have experimental data showing that this precise neuronal migration depends on the interaction between postmitotic cells and special path-finding elongated fibers that exist transiently in the brain," said Dr. Rakic. "This interaction, which depends on molecules in the cell membrane surfaces, is highly sensitive to temperature, chemistry and irradiation. So I predicted that even far from the epicenter of the blast, radiation might also affect neuronal migration."

Six months later Dr. Rakic received another telephone call. A Japanese neuropathologist found the protocol of one patient who was a fetus at the time of the blast and died 12 years later. After her death, pathological examination showed clearly that a lot of neurons were dispersed below the cortex. Because the neurons didn't reach their normal position, they couldn't make appropriate contacts and therefore couldn't function properly.

Thus, although Dr. Rakic's laboratory is devoted to experimental work with animals, the work has direct implications for neurology and psychiatry.

"I have always been fascinated with how the human brain develops and how it works," he said, "There's not necessarily a direct line from the simplest creatures to human beings. Our work is designed to provide a bridge between the two."
There are different levels of excitement. Science as a social endeavor is exciting. To work with young people and have them learning and contributing; all the human interactions of the people who work together on these projects — I find all that exciting.

CHARLES STEVENS

The human brain contains more than ten billion neurons — give or take ten million. “That’s about the same number as there are stars in our galaxy,” said Dr. Charles Stevens. Each of these neurons communicates with thousands of others by a method of such daunting complexity that a single three-pound human brain has more ‘computing components’ than all the world’s computers taken together.

It’s easy to think of the brain as an electrical system, especially in this age of computers. That invites us to think of neurons, the elements of the brain, as like computer components. And in some ways, the comparison is apt.

Until recently, it was thought that neurons received signals through the dendrites, fibrous branches sprouting from the cell body, integrated them and emitted outgoing signals through the axon, the stem of the neuron. The reality, however, turns out to be more complex. Axon transport is no longer thought to be one-way. There is also reverse flow where substances needed by the cell are brought back along the axon. And dendrites, thought in the past to only receive signals, may also leak substances in the other direction.

The signalling system between neurons is both electrical and chemical.

The signal generated by a neuron is an electrical impulse, but the signal is transmitted along the axon and across the synapses chemically. These signal-transmitting chemicals, neurotransmitters, carry the message from one neuron to another.

Specific molecules on the membrane of the neuron are responsible for nerve impulses and for synaptic transmission. “These protein molecules that are embedded in the cell membrane are called ‘integral membrane proteins’. They are the key to understanding neuron function and therefore, brain function,” explained Dr. Stevens.

A special class of these proteins, called channels, are the molecules responsible for the electrical activity of the brain. “All cells have pumps to keep calcium and sodium ions on the outside and potassium ions on the inside,” continued Dr. Stevens, “and they also have channels that spend the energy stored by the pumps by opening and closing to let ions pass through the membrane. The flow of ions causes voltage changes that give rise to nerve impulses and electrical activity.

“When one of these channels opens, sodium ions, for instance, will move from the outside of the cell to the inside. An electrical current results from this movement, and the amount of that current is minute,” said Dr. Stevens. “Amps are a measure of how much current flows through a light bulb. Milliamps flow through transistors. Picoamps flow through these pores. A picoamp is a thousandth of a milliamp, so it’s a millionth of an amp. Usually a pore stays open for a thousandth of a second and then it closes. We measure the picoamps that flow through during that instant.”

There are hundreds or thousands of different kinds of channels, but they all belong to two major categories. One category is responsible for nerve impulses and the other category is responsible for synaptic transmission. The first category opens and closes in response to voltage differences, and is called ‘voltage-gated’. The second type opens when a particular molecule, a neurotransmitter, binds to a receptor on the channel protein. These chemically-gated channels are called ‘ligand-gated’.

According to Dr. Stevens, the fact that specific molecular properties are at the core of brain function has been known for a long time. But the exact molecular operation is now becoming available because of new techniques.

“The methods we use now to study individual channel molecules didn’t
exist a decade ago,” Dr. Stevens said.

At the turn of the century, many people believed that molecules were mathematical fictions, not real entities. “And now we study them one at a time,” said Dr. Stevens. “We take pictures of individual molecules through electron microscopes so that things no one had even seen when I was in college we not only see, but we study.”

Even as recently as ten years ago, no one had ever recorded the current that flowed through a single channel. In fact, the notion of the structure of a channel was vague. Inferences about how channels behaved were made indirectly by very complicated mathematical techniques.

“Not only did people not quite believe that channels existed, they didn’t know how many there were and how to tell them apart. But now that we can record from a single channel, we can recognize them because each one behaves differently,” stated Dr. Stevens. “So the kinds of things that were inconceivable less than a decade ago are now our bread and butter.”

The immediate goal of the work is to make a physical theory for the nerve impulse. “We should be able to predict the outcome of any experiment on nerves that you could pose from the equations we devise. These equations shouldn’t be arbitrary, but should express the essential physical mechanisms that underlie nerve impulses. That’s been a goal of neurobiology for a long time,” he explained.

Although researchers can take photographs of an individual neuron, they still cannot count the exact number of channels on a cell. “In the photographs, they don’t come with a label that says, ‘I am a channel’, so we have to know that the channel exists by some other method before we can take the picture,” said Dr. Stevens. “The new molecular and cloning techniques and the methods of recording the electrical flow through a single channel now allow us to count the number of molecules for the first time.

“The precise implications aren’t clear yet because we’ve been studying individual molecules for such a short time, but we have a fair idea of what to expect. One area researchers are investigating is learning, seeking the methods of information storage,” Dr. Stevens continued. “Learning also involves channels. At one level, learning is thought to depend upon a particular connection — say between cell A and cell B. By virtue of experience and the arrangement of nerve impulses, cell A becomes either more or less potent in relation to cell B. That happens because the properties of some of the channels are modified. This is called neuromodulation.”

Dr. Stevens made the comparison to what happens when a technician wants to change the characteristics of an electronic circuit in a computer. “If you want the computer to go faster, for example, you unplug one set of chips and plug in another,” he said. “The nervous system has the interesting ability to change its own behavior. It’s as though it were using the same chips instead of changing chips, but modifying their characteristics so that they behave differently. People in our group are studying how this happens — how neurotransmitters modify the behavior of channels.”

Presumably, all diseases of the nervous system that are not associated with trauma or viruses are going to be ultimately related to these molecular mechanisms. “The fate of the basic scientist is to work out all the mechanisms as far as you can go,” concluded Dr. Stevens. “Once you’ve done that, you know what to do for diseases. But you can’t know which diseases are related to which mechanisms until you know what the mechanisms are. I’m at the level of working out the basic mechanisms.”

To set a problem for yourself and get a solution is exciting. It’s like climbing mountains, I suppose, because you tell yourself you’d be happy if you could do this one thing — and then you achieve it.

Science is an esthetic discipline. Whenever you finally understand something, there’s a great simplicity implied by your understanding. You can suddenly see many things explained by one simple idea.

It’s also exciting to realize that you’re doing something that people have dreamed about, something that was inconceivable before. To make a contribution is an exciting thing. That’s true of all science.

All of these things are true of any part of science, of course, and this is no different from any other kind of science — but it’s more intensified in neuroscience today because the field is moving so rapidly and everything is so new. It’s as if you’ve come into a new world where nothing is like anything you've ever seen before.

Dr. Stevens
"Because psychoactive drugs are chemical substances, they act on chemical systems in the brain," said Dr. George Aghajanian, professor of psychiatry and psychopharmacology. "In the mammalian brain, 99 percent of all communication between neurons is chemically mediated. One neuron secretes a chemical substance that will cross a synapse and affect the firing of the next neuron. There are dozens of these chemical transmitter systems in the brain."

According to Dr. Aghajanian, most of the drugs that affect behavior — antipsychotic drugs, antidepressant drugs, antianxiety drugs and antimanic drugs — affect some specific aspect of the process of chemical neurotransmission.

"An antipsychotic drug, for example, blocks the transmission of dopamine at the synapse. Antianxiety drugs affect the transmission of impulses carried by another neurotransmitter, gamma-amino-butyric acid (GABA)."

As a working hypothesis, investigators assume that specific brain chemicals affect specific patterns of neuronal behavior. They concentrate on one neurotransmitter and try to relate the effects of a drug to that substance. Because the drug might have certain behavioral effects, an association is established between that particular neurotransmitter and a behavioral or psychiatric state.

"That's oversimplified, of course, because for one thing, we know that all of these neurochemical systems are connected to each other. There's a growing recognition that we have to understand how these different systems interact," said Dr. Aghajanian. "The research moves back and forth, between trying to isolate effects and trying to understand interactions. We first focus on one substance and one synapse. We try to understand the process of transmission mediated by that substance and how drugs affect that process. Then we must step back and see how that fits into the general process."

The group within which Dr. Aghajanian works is interdisciplinary. He himself does cellular electrophysiology as well as electromicroscopy to look at the functional and morphological aspects of transmission on single neurons or synapses. Others in the group take a neurochemical approach and look at the chemical nature of receptors on nerve cells.

"Much of our work has to do with characterizing precisely the nature of each receptor. We can look at this electrophysiologically by seeing how the application of a chemical transmitter will act at one of these receptors. We can look at it biochemically. And we can look at it behaviorally," explained Dr. Aghajanian. "We have people in the group who study the behavioral consequences of stimulating certain kinds of receptors. One of the real advances in neurophsychopharmacology in recent years has been to define more precisely the subtypes of receptors through which the chemical transmitters act."

This opens the way to developing drugs that are more selective for the specific receptor subtypes in order to minimize untoward side effects. More precise definitions of the receptor subtypes should make it possible to promote the therapeutic action of a drug and reduce unpleasant side effects.

At one time, receptors were only conceptual constructs. It was assumed that when a cell responded in a particular way to a specific substance, a chemical substance on its surface acted as a recognition site to detect the presence of the chemical messenger. When this happened, a cascade of biochemical and electrophysiological events would result, leading to the final response of that cell to the transmission of the chemical message.
Recently developed biochemical methods allow identification and isolation of those receptor substances, which are embedded in the cell membrane. Only a few receptors have been fully characterized so far, and researchers are trying to isolate virtually every known receptor to determine its primary structure, that is, its sequence of amino acids.

Most cells have receptors for a large number of chemical transmitters, but not all cells have the same complement of receptors. A specific type of neuron can also be characterized by its receptivity to the known types of chemical transmitters. This is done electrophysiologically, by recording the activity of a single neuron.

"You can place a micropipette into an individual neuron," said Dr. Aghajanian. "Then you inject a detectable dye into the neuron, and later analyze the brain histochemically for the presence of a specific neurochemical. You can show the chemical is in a given cell because the dye causes it to fluoresce. Then one knows with absolute certainty that a given cell belongs to a certain neurotransmitter type."

In some cases, this research has obvious therapeutic implications. One dramatic example from recent research led to a treatment for opiate withdrawal. The treatment is the result of research on the locus caeruleus, which is the primary source of norepinephrine efferentation in the brain. When these neurons are activated excessively in primates, an anxiety-like state results.

"In the laboratory here, we've shown that these cells become activated during opiate withdrawal," said Dr. Aghajanian. "This led to a connection being made between the symptoms of opiate withdrawal and the activation of these neurons.

"Normally, the release of norepinephrine from these neurons maintains a state of alertness or attention. When they become overactivated, this might become anxiety. We know that these cells are heavily laden with receptors for opiates, including morphine," he continued. "However, repeated administration makes these cells tolerant to morphine, which has an inhibitory effect and suppresses their firing activity. If you then remove the morphine, the cells become overactive, which causes withdrawal symptoms.

"Basic laboratory researchers and clinical researchers subsequently collaborated to develop a treatment for opiate withdrawal that suppresses the activity of neurons by affecting a different receptor. Clonidine, an anti-hypertensive drug, suppresses many of the unpleasant symptoms of opiate withdrawal by suppressing a non-opiate receptor, the alpha-2-adrenergic receptor. Because the continued administration of opiates doesn't affect that receptor, the cell is amenable to the inhibitory effect of clonidine. We normalize the cell's activity by, so to speak, making an end run around the opiate receptor.

"Although the receptors for opiates and the alpha-2-adrenergic receptors are distinct, we've shown that their final action is mediated through common mechanisms, which is why one can substitute for the other. Both receptors act through suppressing the cyclic AMP system, which ultimately regulates the opening and closing of the potassium channel.

"In a way, we start where the basic laboratories like those of Drs. Goldman-Rakic, Rakic, and Stevens leave off. We try to integrate the various basic approaches into an overall picture of how drugs affect the brain's functioning and particular systems in the brain. By this kind of approach, we expect to relate basic research to clinical research," concluded Dr. Aghajanian.

What I find most exciting is that we can get down to an elementary level of analysis, we can look at ion channels and molecular receptors. This is the sort of thing that could only be done in simple systems in the past because the mammalian brain seemed to be too complex to attempt that kind of analysis.

Now we can do that kind of fundamental analysis in the mammalian brain. And it's through this work that we will be able to recognize the real advances. Then, at the same time we're doing fundamental research, we can work at the clinical level. That's what I find exciting.

Neuroscience is advancing rapidly, but the cooperation of neuroscience and psychiatry is coming more slowly. Yale is one of the few places where basic research in neuroscience takes place side by side with clinical research. I find that most exciting.

Dr. Aghajanian
perfecting organ transplantation
—and beyond

by Polly Carter

Dr. M. Wayne Flye's goal is to transform Yale-New Haven Hospital into a multi-organ transplant center. In the process, he is also helping to transform his branch of medicine.

This protean organ transplant surgeon manages to juggle two separate spheres of research together with his clinical work and his hectic schedule of operations. "It is important for a clinician and even more important for a surgeon, to bridge the gap continually between what's happening in the laboratory and what's happening clinically," Dr. Flye believes. "As a physician, I can appreciate some of the problems and applications of current research better because I see the day-to-day laboratory results. At the same time, some of my clinical problems arouse questions that wouldn't occur to or be appreciated by someone working only in the laboratory." This balanced perspective enables Dr. Flye to carry out both immunosuppressive research, which is directly applicable to daily practice, and regenerative research, which is ambitiously aimed at the future.

After four years with the University of Texas Medical Branch in Galveston, Dr. Flye joined the Yale faculty in February 1983 as associate professor of surgery and the director of organ transplantation and immunology. He is also a consultant for the National Cancer Institute.

Although a pioneer in his field, Dr. Flye is unusually experienced. He had, in fact already performed over 300 porcine liver transplant operations before performing the operation in October last year on a six-year old girl, and earning Yale-New Haven the rank of sixth center in the United States to perform a liver transplant.

To date, Dr. Flye has performed eleven liver transplants at Yale-New Haven, and has three patients waiting. "It's just a matter of getting the necessary organs," he said. He has lost count by now of how many pigs have passed successfully under his scalpel.

"Dr. Flye is a supersurgeon," declared his research associate, George Rodgers. "He's capable of doing things other surgeons wouldn't attempt, because his research and his technique go hand in hand." An assistant in research in surgery, Mr. Rodgers has been working with Dr. Flye since 1979, taking care of the myriad details of their immunosuppressive research investigating the potential of the new wonder drug cyclosporine (CyA).

Scientists discovered cyclosporine almost by accident in 1970, while they were looking for a new antibiotic. At first, few researchers appreciated the drug's specific immunosuppressive qualities; then in 1977, Professor Calne of Cambridge University demonstrated CyA's ability to prolong organ graft survival in laboratory animals. That news, according to Mr. Rodgers, "really woke up the transplantation world."

Cyclosporine forces the immune system to accept a transplanted organ instead of perceiving the grafted tissue as a foreign antigen or "enemy" substance, and mistakenly defending the body by fighting and rejecting the transplant.
Although there are hundreds of subsets of lymphocytes, or white blood cells, that can be directed against one antigen or another, there are two main categories: B cells and T cells. While B cells make antibodies, T cells regulate B cells and the immune response.

When the body is stimulated by an antigen, the T cells divide so that a clone of cells expands. CyA suppresses the immune system by preventing this rapid multiplication of T cells, but, unlike other immunosuppressive drugs, CyA operates without actually killing cells; it simply blocks the T cells from dividing.

"With cyclosporine we can inhibit one particular clone of cells to an organ," explained Dr. Flye. No one yet knows exactly how CyA works on the molecular level, but investigators soon hope to find out.

Still another important feature of Dr. Flye's work is his special pig farm presided over by Mr. Rodgers. Since most farm pigs are so inbred for meat qualities, they often accept organ grafts without treatment. Mr. Rodgers specially breeds genetically defined miniature pigs in order to examine the response to grafts across genetic barriers and modification of rejection.

The two most important criteria in choosing a donor liver to transplant are compatibility of blood type and compatibility of size. Normally, if the host pig A is given pig B's liver, it rejects the liver immediately, perceiving it as antigenic. However, when Dr. Flye puts B's liver into A and proceeds to give A a short course of cyclosporine (for as brief a time as 25 days) to protect the liver, he circumvents the rejection process and pig A accepts the graft.

When a kidney of the same B genetic makeup is grafted, the host pig A rejects this additional organ, although the liver remains healthy. A second attempt at "B" kidney transplantation provokes a hyperacute rejection while the original B liver in pig A continues to be well tolerated. This indicates that the kidney has a different antigenic structure from that of the liver. In general, livers aren't as antigenic as kidneys.

"Whenever you have tissue transplanting you have to worry about tissue typing, and make sure the tissue matches," Mr. Rodgers said. He is in charge of maintaining the genetic integrity of the herd, at present about 15 breeders and their offspring. Two more pig patients, placidly awaiting the outcome of Dr. Flye's latest liver-and-kidney grafts, live in the medical school animal care facility.

The FDA did not approve general release of CyA until December 1983, which meant Dr. Flye had to obtain special permission to use the drug to ensure graft acceptance when he performed his first three liver transplant operations.

Dr. Flye's first clinical transplant operation was on a six-year old girl, who had been given only a few weeks to live. After alerting the New England Organ Bank to search intensively for a donor organ of compatible size and blood type, a 20-month old drowning victim was reported in Florida. Dr. Flye and his support team flew there at 2:30 am to retrieve the liver. Since
How can a rat's liver completely regenerate within three to four days when 70 percent of it is removed? And why, once the organ has reattained normal size, does the regenerative process then stop? Why does the liver not keep on growing uncontrolledly as a tumor would? If harnessed, this process might be transferable to human beings.

George Rodgers, an assistant in research in surgery, works with Dr. Flye in research that may ultimately lead to human organ regeneration.

livers are so delicate that they cannot be stored outside of the body for more than six to eight hours, the child was called away from her brother’s birthday party later that same morning, and the transplant was completed by 11 am. Protected by CyA, the liver began to function at once.

The liver’s complexity has earned it a reputation as perhaps the most difficult organ to transplant. It should not take, proportionately, anything like the same amount of time and effort for Dr. Flye and his colleagues to master transplantation of the heart, lung, or pancreas.

Approaching his goal of treatment of liver disease from another direction, Dr. Flye is also conducting research to try to define the molecular stimulus of regenerative growth, and to characterize whatever protein or other factor is modulating the regenerative behavior which is almost unique to the liver.

In an aside, Dr. Flye provided background: “If you take an amphibian — a salamander or a starfish — and cut its leg off, it will regenerate the whole leg. As you go higher up the phylogenetic scale, you lose that ability. There have been studies with rats, though, in which the forearm was removed and an electrical stimulus applied, with some regeneration resulting.

“This electrical stimulation may release a chemical that promotes regeneration,” explained Dr. Flye. “For some reason as we’ve evolved most of our organs have lost that regenerative ability, except for the liver, and to a lesser extent the kidney.”

How can a rat’s liver completely regenerate within three to four days when 70 percent of it is removed? And why, once the organ has reattained normal size, does the regenerative process then stop? Why does the liver not keep on growing uncontrolledly, as a tumor would? If harnessed, this process might be transferable to human beings.

To study the precise mechanism of regeneration it is necessary to isolate the responsible molecules. This is obtained by first performing a rat hepatectomy; making an emulsion out of the organ; and extracting from the supernatant the molecule that stimulates other cells to grow in culture. Knowing already that “there’s something in there,” Dr. Flye and his staff pass the preparation through a series of biochemical purifications to try to characterize this “something”.

Presumably the same molecules are instrumental in repairing and regenerating the injured liver in a patient. “If we could properly characterize this process, we’d be a step closer to providing help for a patient’s liver to regenerate to support a transplanted liver during rejection,” speculated Dr. Flye. “It must be a fairly basic mechanism of control for the liver that regenerates since other major organs like the heart do not have this capacity.

Ultimately, we would like to reach the stage where a failed organ would not need to be replaced at all, but could be supported while it regenerated its capabilities.”

At present, there are still very few multiple organ transplant centers in the United States. The various interests represented at Yale-New Haven Medical Center are directed by Dr. Ali Khodadoust for ophthalmology; Dr. Gary Friedlaender for orthopedics; Dr. Charles Cuono for skin grafts; and Dr. Flye, Dr. Alexander Geha, and colleagues in general and cardiothoracic surgery for kidney, liver, heart, lung and pancreas.

Dr. Flye is now working out the details of pancreas transplants in his laboratory. Further studies will examine lung transplants. “The lung is tricky because it has so many enzymes that begin to digest it as soon as you try to preserve it,” he observed. “Improvements in organ preservation are of concern to all areas of transplantation; however each organ has its special requirements.”
... IN PROGRESS

... a brief report on some of the many research projects ongoing in the School of Medicine.

PAIN

In the early 1970’s, Dr. Luke Kitahata, professor of anesthesiology, was among the first to discover that opioid analgesics are effective in blocking pain signals to the spinal cord. It was the first indication that a drug such as morphine acts on sites other than the brain to alleviate pain. This initial work by Dr. Kitahata has led to an expanding field of research in the pharmacology of pain transmission in the spinal cord, and possible ways of selectively targeting specific drugs that would be more effective in alleviating pain.

Administering opioid analgesia to the spine has several advantages for surgical patients as well as for nonsurgical patients with acute and chronic surgical patients as well as for non-surgical patients with acute and chronic pain syndrome. Requiring a minimum of drugs for a very powerful effect, it acts on only those parts of the body involved pain. Unlike conventional spinal anesthesia with local anesthetics, the patient does not lose touch sensation or motor function.

As with any new technique, however, there are complications. One infrequent but serious problem is respiratory depression following injection of opioid drugs. Dr. Kitahata and his colleagues are studying the basic mechanisms of this condition in order to increase the therapeutic value of this newly developed method of pain control.

In related research, Dr. John G. Collins, assistant professor of anesthesiology and pharmacology, has demonstrated that injection of epinephrine near the spinal cord is effective in blocking neurons that signal pain. This action provides an alternative explanation for epinephrine enhancement of a spinal block.

Of more significance, Dr. Collins has demonstrated that when applied to the spinal cord in combination with an opioid, epinephrine requires only very low doses to block pain signaling neurons. In fact, the dosage is so low that neither drug used independently in that amount would be effective.

These findings have led to an ongoing study of the interaction of known pain inhibiting neurotransmitters in the spinal cord. The ultimate goal is to develop a multdrug combination that, when applied near the spinal cord, will block pain signals without producing undesired side effects.

The neurophysiological basis for pain accompanying disease or injury is frequently obscure. Although it is possible for pain to originate solely within the central nervous system, the usual cause is the activation of certain sensory peripheral nerve fibers in muscle, joint, bone or visceral organs. The sensory receptors at the ends of these fibers specialize in responding to noxious stimulation.

Dr. Robert LaMotte, associate professor of anesthesiology and neuroanatomy, has developed an experimental neurophysiological model of clinical pain in which pain produced in humans by localized heating of the skin to precisely controlled temperatures is measured by quantitative sensory testing. The responses of heat sensitive "pain receptors" are recorded electrophysiologically in anesthetized monkeys as well as in awake humans. The receptor responses are then correlated with the sensory measurements of pain in humans.

In other experiments, Dr. LaMotte and his colleagues have altered the local chemical environment of these heat-sensitive pain receptors, either by mild burn to the skin or by local injection of a minute amount of inflammatory chemical substance. This radically increased pain sensitivity: normally non-painful stimuli such as gently warming or rubbing of the skin, became painful; and normally painful stimuli became much more so. In neurophysiological experiments in Dr. LaMotte's laboratory this clinical state, known as hyperalgesia, was shown to result from the local sensitization of the heat-sensitive pain receptors — particularly those with non-myelinated nerve fibers.

These experimental models of pain and hyperalgesia will be useful in determining how changes in the local chemical environment of pain receptors can alter their sensitivity. Such alterations could be responsible for clinical conditions such as causalgia — a chronic burning pain, sensation and hypersensitivity to innocuous stimulation, such as the rubbing of clothing against the skin. The model will also be useful in the development of drugs to block functions in pain receptors without affecting other types of sensory receptors.

CANCER

The National Cancer Institute recently awarded a grant of $421,000 for support for three years of research being conducted by Dr. Sara Rockwell on the use of perfluorochemical emulsions as adjuncts to radiotherapy. The target for this research is improved treatment of those solid tumors which are resistant even to the best of current treatment.

Because of their oxygen transport properties, perfluorochemicals have been studied at a number of institutions for use in perfusing organs for transplant and for use after trauma or during surgery when blood transfusions are impossible, or are refused on religious grounds. Dr. Rockwell, professor (adjunct) of research in therapeutic radiology, is investigating the effects on solid tumors of such perfluorochemical. Fluosol-DA 20%, to determine whether this agent may be useful as an adjunct to radiotherapy.

"Laboratory studies on animals with solid tumors, and studies of cancer patients treated with radiotherapy and combined modalities suggest that the resistance of some tumors to treatment may be the result of oxygen deficient (hypoxic) regions in the tumors," Dr. Rockwell explained. "Solid tumors often have abnormal, inadequate and poorly functional vascular beds, which render many tumor cells chronically or transiently hypoxic. Because oxygen sensitizes cells to the effects of X-rays, these radiation-resistant hypoxic cells may survive treatment with radiotherapy and allow tumors to recur.

Fluosol is composed of a balanced salt solution with properties similar to plasma, containing a very fine stabilized emulsion of droplets of liquid perfluorochemicals (PFCs). These PFCs have the unusual property of being able to dissolve very large amounts of oxygen — up to 40 percent of their weight. When Fluosol is infused intravenously, the PFC droplets will circulate in the blood and carry oxygen — and because they are much smaller than red blood cells, they may reach and deliver oxygen to areas inaccessible to red cells, such as the hypoxic regions of tumors.

In preliminary studies, Dr. Rockwell and her colleagues have found that infusing laboratory animals that have breast cancer or sarcomas, with Fluosol and having them breathe oxygen before and during radiotherapy increases the number of tumor cells killed by radiation, but does not increase the toxicity of the radiation to the blood-forming cells of bone marrow. Further studies will examine the effect of Fluosol treatment on other tumors and other normal tissues, to evaluate whether this agent in combination with radiotherapy has
the potential for effective treatment of solid tumors in humans.

Another project, in collaboration with Dr. Alan Sartorelli, acting chairman of the Department of Pharmacology and director of the Comprehensive Cancer Center, has examined the effects of drugs which might selectively kill hypoxic cells because of their unusual physiologic characteristics or environment. These drugs — bioreductive alkylating agents — are not active in their original forms, but are enzymatically activated within cells, to give reactive drugs. Some bioreductive alkylating agents are activated more readily in hypoxic cells than in aerobic cells, and therefore, selectively kill hypoxic cells. Members of Dr. Rockwell's laboratory, as well as of other laboratories in the Department of Therapeutic Radiology, have been working with Dr. Sartorelli and his colleagues to assess whether the combination of these drugs and radiotherapy would be especially effective in the treatment of solid tumors.

In another study, Dr. Ravinder Nath, associate professor of therapeutic radiology, in collaboration with Dr. Richard Peschel, assistant professor, Dr. Robert J. Schulz, professor, and Laurence Gray, a radiation physicist, is developing the use of Americium-241 radioactive resources for treatment of uterine cancer in anticipation of achieving two important benefits: the ability to protect critical normal organs; and the substantial reduction of radiation exposure to medical personnel.

Radium was first used in the treatment of cancer of the uterine cervix in 1903. Today, therapy typically combines the use of intracavitary radium or cesium radioactive sources and external beam therapy. Intracavitary radiation — a form of brachytherapy — is performed by placing radioactive sources at very short distances from the tumor in a body cavity to deliver a highly localized, lethal dose to the tumor while sparing the sensitive normal tissues nearby.

Because the lower energy gamma rays of americium can be effectively shielded with thin layers of lead or gold placed on the outside of the applicator, Dr. Nath and his colleagues are developing Americium-241 sources for brachytherapy. A thickness of 0.4 mm of lead can reduce the intensity of americium gamma rays by half, in contrast to 12 mm of lead required to shield radium gamma rays. In addition, it should be possible to custom modify the applicator for each patient's anatomy and tumor distribution, according to Dr. Nath.

Further, Dr. Nath has predicted that, with americium, it would be possible to place effective shielding material within body cavities. For example, a patient's bladder could be filled with hypaque and the rectum with barium sulfate to shield the distal portions of these organs, while still treating the more proximal areas where tumor infiltration might occur.

In addition to therapeutic consideration, the exposure to radiation of medical personnel is another consideration in the use of brachytherapy techniques. Nurses who care for patients undergoing conventional brachytherapy receive a higher rate of exposure to radiation than most members of a hospital staff, because the high energy of gamma rays of radium and cesium make it impractical to reduce exposure by shielding. Devices developed to remove the radioactive sources from a patient during routine nursing care have not been entirely satisfactory because they compromise the positioning of radioactive sources and are uncomfortable and inconvenient to the patient.

The use of americium would be strikingly different, according to Dr. Nath, because a lead shield of only 1.4 mm thick would reduce radiation levels by a factor of 1000. Effective shielding of operating room personnel could easily be achieved, and exposure to medical personnel and visitors would be negligible.

Most anticancer drugs do not cross the blood-brain barrier, and are therefore ineffective as brain tumor therapy. In research to find a more effective treatment of brain tumors and other cancers of the central nervous system, Dr. William N. Hait, assistant professor of medicine, is studying the interaction of drugs with calmodulin, a calcium-binding protein which plays an important role in cell proliferation and cell differentiation.

He will isolate calmodulin from normal brain tissue and compare its characteristics with calmodulin isolated from brain tumors. "We have been able to demonstrate that drugs which inhibit the activity of calmodulin will inhibit the growth of brain tumor cells grown in culture," he said. "Our goal in this project is to find more potent inhibitors, and ones that may potentially be selective for the calmodulin of the tumor cells. Since many of the inhibitors previously identified are known to accumulate in the brain, it should be possible to achieve higher concentrations of the drugs in tumors grown in animal tissue," he explained. This re-
search is supported by a grant from the American Cancer Society.

A major concern in anticancer drug therapy is the damage these drugs cause to surrounding normal tissue. In an effort to learn more about the interactions of normal cells and cancer cells during chemotherapy, Dr. Evangelo Canellakis, professor of pharmacology, has developed a method for growing cancer cells in co-culture with normal cells. Because the method is extremely sensitive, he is able to follow the outgrowth of five to ten tumor cells seeded on a bed of normal cells. The tumor cells then form new individual colonies. At this point, Dr. Canellakis is able to estimate the growth of individual cancer cells that grow in contact with normal cells.

Using this method, he will study the response of cancer cells to drug toxicity, to determine whether, as it is thought, normal cells protect cancer cells from the killing action of the drug. Preliminary studies have indicated that the effect of an anti-cancer drug on cancer cells is influenced by the length of time the cancer cells have been in contact with the normal cells, on the growth rate of the normal cells and on communication between cancer cells.

**HYPERTENSION**

The School of Medicine received $2.1 million from the National Institutes of Health to participate with 16 other institutions in a collaborative clinical trial to determine whether long-term administration of antihypertensive therapy to elderly persons with isolated systolic hypertension (ISH) reduces the incidence of stroke and other complications of high blood pressure. Dr. Henry R. Black, associate professor of internal medicine, is principal investigator of the program at Yale.

More than three million Americans have ISH. In fact, the condition is more prevalent than diastolic hypertension in the age group over 70, and affects as much as twenty percent of that population. Previous studies have indicated that these persons face a two-to-threefold increased risk of stroke, as well as other cardiovascular diseases and death.

Whether or not ISH should be treated is an important health issue, not yet resolved because of a lack of sufficient scientific evidence. “This study will provide the necessary facts about this important problem,” said Dr. Black.

“If the study shows that treatment reduces strokes and other complications, we will be able to prevent serious disabling disease with inexpensive and easily applied techniques.”

In addition to assessing the effects of long-term antihypertensive therapy on stroke, the objectives of the study include assessing the effects of this therapy on cardiovascular mortality and mortality from all other causes, as well as the prevention of dementia and depression. The clinical centers will also study possible adverse effects of chronic use of antihypertensive drug treatment in the elderly.

The Systolic Hypertension in the Elderly Program (SHEP) will last approximately six years. Each of the 17 participating institutions will serve as a Clinical Center for the SHEP program and will identify and enroll 300 relatively healthy individuals over sixty years old who have ISH. Half of this group will receive standard antihypertensive therapy for from four to six years; the others will receive a placebo. All of the participants will be seen at regular intervals by the medical personnel of the SHEP clinical centers.

Dr. Charles Francis, associate professor of medicine, and Jan Davey, M.S.N., clinical studies researcher in medicine, will work with Dr. Black in the Yale SHEP program. Yale-New Haven Hospital, Park City Hospital in Bridgeport, and the Meriden-Wallingford Hospital will participate in patient evaluation and follow-up.

**PEDIATRICS**

The School has received a grant of $800,000 from the Robert Wood Johnson Foundation to participate in the Foundation’s Infant Health and Development Program to test the effectiveness of combining early childhood development services with pediatric care in reducing the incidence of health and developmental problems in low birth-weight infants. There are indications that programs designed to provide pediatric social and educational support to low birthweight infants and their families promote enhancement of development in these infants in preschool years, but as yet there has been no definitive study on a national level.

In the program, 135 low birthweight infants will be enrolled and randomly assigned to one of two treatment levels. Infants will receive full continuing pediatric and developmental services to assess their progress after discharge from the hospital, according to Dr. David T. Scott, assistant professor of pediatrics, director of the Yale study. Infants in one of the groups will receive additional services, including parental education and day-care provided by the Quinns College Day Care Facility.

Pediatric and developmental assessment services will take place in the Department of Pediatrics, co-directed by Dr. Scott and Dr. Laura R. Ment, associate professor of pediatrics and neurology, in collaboration with Dr. Richard A. Ehrenkranz, associate professor of pediatrics.

Most traditional pediatric programs prepare residents to deal with acute illness and well child care, but fail to provide comprehensive educational experiences in three critical areas: developmental and psychosocial problems, chronic illness, and adolescent medicine. Dr. Paul McCarthy, professor of pediatrics, is director of the Integrated Continuity Group Program in the Department of Pediatrics, which has been developed to improve residents’ training in these areas. The program is supported by a grant of $618,000 from the Health and Human Resources Division of the Public Health Service.

Twelve residents will participate in the Integrated Continuity Group (ICG) throughout the three years of training. They will see on a regular basis a panel of continuity patients including well children as well as children with developmental and psychosocial problems, chronically ill children, and adolescents. Faculty with special interest and expertise in these critical areas, will teach and supervise the program. A nurse practitioner, social worker and child psychiatrist will be an integral part of the supervisory team.

It is anticipated that on completion of the program, residents will be competent to (1) identify and evaluate psychosocial and behavioral problems of children in their practice; (2) provide appropriate counseling for psychosocial and behavioral problems and make appropriate referrals to mental health clinicians; (3) collaborate with other health and educational professionals in the care of chronically ill children; (4) understand the impact of chronic disease on families; (5) recognize and manage psychosocial problems of adolescents.

If evaluation of the program clearly demonstrates its effectiveness, the ICS program will become a model for teaching general pediatrics at Yale. It could also serve as a model for other teaching programs in pediatrics throughout the country.
JAVITS AWARDS RECOGNIZE OUTSTANDING RESEARCH IN NEUROSCIENCES BY FOUR YALE SCIENTISTS

In its 1984 fiscal appropriations, the Congress of the United States asked that special awards be made for outstanding research in the neurosciences in honor of Jacob K. Javits, the former senator from New York. Since then, four Yale scientists have received Javits Neuroscience Investigator Awards designated by the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) for investigators who have a distinguished record of substantial contribution in a field of neurological or communicative science, and who can be expected to be highly productive over the next seven years.

In February, Dr. Elias Manuelidis, professor of neuropathology and neurology, received $1.2 million for his research on Alzheimer's disease, and Dr. Pasko Rakic, Dorys McConnell Duberg Professor and chairman of the Section of Neuroanatomy, received $1.5 million for research on the neurogenic processes in the fetal brain. (Yale Medicine, Spring 1984).

More recently, NINCDS awarded $1.2 million to Dr. Robert K. Yu for basic research to understand degenerative diseases of the central nervous system, and $1 million to Dr. Robert H. LaMotte for his studies on the mechanisms of pain. The awards are for a period of seven years.

Dr. Yu, professor (adjunct) of research in neurology, is regarded as an outstanding scientist in the fields of neurochemistry and developmental neurobiology. In ongoing basic research to better understand the processes of motorneuronal degeneration seen in amyotrophic lateral sclerosis (ALS), multiple sclerosis (MS) and other disorders of the central nervous system, he is studying normal and abnormal glycosphingolipids, sugar containing substances which are located in cells of nerve fibers. In particular, he is investigating the properties of glycosphingolipids called gangliosides, to better understand the relationships of ganglioside metabolism and the physiological dysfunction associated with a variety of neurological diseases.

"There is evidence that gangliosides play an important role in the degenerative process of the central nervous system seen in these diseases," Dr. Yu said. "Through our research, we hope to be able to develop methods to interfere with this process."

Dr. LaMotte's research is directed at determining the neurophysiological origins of cutaneous pain, itch and hyperalgesia. Specifically, the studies will attempt to determine the chemical origin of hyperalgesia.

"The results of these studies will be useful in identifying those central neurons at the level of the thalamus, that process sensory information about pain, itch and hyperalgesia," he explained. This information, in turn may lead to the development of specific pharmacological agents that act peripherally to block the pain-causing chemical or to act centrally to block sensory processing in neurons that transmit pain.

Dr. LaMotte is an associate professor of anesthesiology and neuroanatomy.

YALE SCIENTISTS RECOGNIZED FOR AN IMPORTANT BREAKTHROUGH IN RESEARCH ON LUPUS

A team of Yale medical scientists has been awarded the first Lee Howley Sr. Prize for outstanding research which represents a major advance in the understanding of rheumatic diseases. The Arthritis Foundation presented the prize to Drs. Joan A. Steitz, John A. Hardin and Michael Lerner for the identification of prominent autoantibodies in systemic lupus erythematosus.

Yale is considered one of the leading institutions in the world for systemic lupus erythematosus (SLE) research. Scientists have come here from Japan and Europe to learn new techniques developed by Drs. Steitz, Hardin and Lerner for clinical and basic science research in SLE and other rheumatic diseases.

Dr. Steitz, professor of molecular biophysics and biochemistry, is internationally recognized for her research in deciphering molecular mechanisms of gene expression in bacterial cells. Dr. Hardin, who has made significant contributions to the understanding of the pathophysiology of SLE with his earlier studies of immune regulation, is associate professor of medicine in the Section of Rheumatology. Although Dr. Lerner's career began only a few years ago, he has received several important awards for his research. A 1981 graduate of the School of Medicine, he was appointed assistant professor of molecular neurobiology last fall.

By providing a clear concept of the nucleoprotein autoantigens that seem to trigger diseases such as SLE, this team has made a major contribution to both basic molecular biology and to clinical medicine. In addition, their studies have demonstrated the usefulness of human antibodies as tools for basic research.

The work began in 1979, when, as a student working with Dr. Steitz, Dr. Lerner began to dissect the structure and function of small RNA-protein complexes that are found in all cells, but which previously had been poorly understood. Using the autoantibodies which are found in practically all patients with SLE as a tool, he was able to define three distinct classes of small nuclear and cytoplasmic ribonucleoproteins.

Using this approach, Drs. Steitz, Lerner, and Hardin have characterized the structures within cells that trigger autoimmune responses to give rise to antinuclear antibodies, the characteristic immune system abnormality in SLE. At the same time, they have developed a group of defined patient sera and monoclonal antibodies for clinical and basic science research.
In recognition of his achievements as a scholar, in honor of that commitment to the highest standards of quality, and for his many contributions in many ways to science, to Yale and to this country, I am privileged to announce the creation of the Robert W. Berliner Professorship of Internal Medicine in the Yale School of Medicine.

—President A. Bartlett Giamatti

The occasion was a reception honoring Dean and Mrs. Berliner on June 23rd in the courtyard of the Beinecke Rare Book and Manuscript Library. Almost 600 guests gathered to join President Giamatti in raising a “glass to Lea and Bob Berliner in affectionate thanks for all they have done to enrich our lives and in the highest and delighted anticipation of the many, many years to come and all the ways they will sustain us.”

Earlier in his remarks, the President cited Dr. Berliner’s accomplishments during the eleven years of his deanship. “Under Bob Berliner’s leadership, the School has become one of the top two or three institutions in America in terms of hosting research supported by peer reviewed grants. He has overseen the creation of outstanding teaching facilities in the Hope Building, the renewal of in-patient teaching facilities at the Yale-New Haven Hospital, the development of the Faculty Practice Plan, and the establishment of the first major fund-raising campaign in the history of the School.”

Dean and Mrs. Berliner
HERE & ABOUT

A NEW CHAIRMAN IS APPOINTED FOR HUMAN GENETICS

Dr. Carolyn W. Slayman, a leading research scientist and educator, has been named chairman of the Department of Human Genetics. She succeeds Dr. Leon E. Rosenberg, who assumed the office of dean of the School on July 1.

In announcing the appointment, President A. Bartlett Giamatti said, "I am enormously grateful to Professor Slayman for taking on this important responsibility, and I am confident that under her leadership the department will continue to flourish."

Dr. Slayman, who is professor of human genetics and physiology, has been a member of the Department of Human Genetics since it was established in 1972. Her special research interest is in the proteins that transport nutrients across cell membranes, and in the genes that code for those proteins. In addition, she is recognized as an outstanding teacher, as exemplified by her appointment as the first director of graduate studies for the Department of Human Genetics, a post she has held almost continuously since 1972. In 1981, she was appointed chairman of the Genetic Basis of Disease Review Committee of the National Institutes of Health. This committee reviews applications for predoctoral and postdoctoral training grants in genetics.

Dr. Slayman graduated from Swarthmore College in 1958 with highest honors in biology and chemistry. She received her Ph.D. degree in biochemical genetics from Rockefeller University in 1963, and spent the following year as a National Science Foundation Postdoctoral Fellow at Cambridge University. Her first academic appointment was as an instructor in biology at Western Reserve University, Cleveland. She came to Yale in 1967 as an assistant professor of microbiology and physiology. In 1972, she was appointed associate professor of human genetics and physiology, and in 1979, she was promoted to professor.

A Research Career Development Awardee of the NIH from 1968 to 1973, Dr. Slayman served on the NSF Advisory Panel on Genetic Biology from 1974 to 1977, and was associate editor and a member of the editorial board of *Genetics* from 1977 to 1982. She is a member of the Board of Overseers of Bowdoin College, Brunswick, Maine, and of the Board of Trustees of Foote School in New Haven.

NEW CHAIRMAN APPOINTED FOR DEPARTMENT OF MB&B

Dr. William H. Konigsberg has been appointed chairman of the Department of Molecular Biophysics and Biochemistry, effective July 1. He succeeds Dr. Dieter G. Soll.

Dr. Konigsberg's research interests include protein chemistry, the molecular biology of DNA replication in bacteriophage, and initiation of blood clotting. He joined the Yale faculty in 1964 as an associate professor of biochemistry, and was promoted to professor in 1976.

A graduate of Rensselaer Polytechnic Institutes, he received a Ph.D. degree in organic chemistry from Columbia University. The following year, he was a National Science Foundation Fellow at The Rockefeller Institute, where he subsequently became a research associate, and in 1959, assistant professor.

A DIRECTOR IS APPOINTED FOR THE MEDICAL LIBRARY

Bella Z. Berson, acting medical librarian since January, has been appointed director of the Yale Medical Library, effective August 1. She will also retain her title of associate librarian of the University Library, a post she has held since 1982.

Mrs. Berson has been associated with the Yale University Library since 1969. A graduate of New York University, where she was elected to Phi Beta Kappa, she received her masters degree in library science from the University of Wisconsin Library School.
Dr. Friedlaender has been appointed chief of the Section of Orthopaedic Surgery. Dr. Friedlaender, who is associate professor of surgery, is well known for his research in orthopaedic transplantation. He is interim president of the American Council on Transplantation, a group formed by the U.S. Department of Health and Human Services, and president of the American Association of Tissue Banks.

Dr. Friedlaender’s major roles will be to facilitate the review of current structure and function of orthopaedics in the Yale-New Haven Medical Center and to make recommendations concerning long range goals for the orthopaedics program at Yale, according to the announcement of his appointment by C. Thomas Smith, president of the Hospital and Dean Leon E. Rosenberg. “The term of this appointment will be short, reflecting a mutual desire to complete expeditiously an orderly review process while sustaining clinical, research and teaching function.

Search Committees Appointed for Chairmen of Three Departments

Dr. Samuel O. Thier, chairman of the Department of Internal Medicine, has been appointed chairman of the search committee for a chairman of the Department of Psychiatry to succeed Dr. Morton Reiser, who has held that post since 1969. Members of the committee include Dr. David Clement, clinical professor of pediatrics; Dr. William Collins, Jr., Harvey and Kate Cushing Professor of Neurological Surgery; Mr. Vincent Conti, vice-president, Y-NHH; Dr. John Fenn, clinical professor of surgery; Dr. Sidney Klaus, professor of dermatology; Judith B. Krauss, associate dean, School of Nursing; Dr. James W. Prichard, professor of neurology; Dr. Sally Provence, professor of pediatrics, Child Study Center; Dr. Pasko Rakic, chairman, Section of Neuroanatomy; and William Kessen, Eugene Higgins Professor of Psychology and Pediatrics.

Dr. Aaron Lerner has announced his intention to retire as chairman of the Department of Dermatology. Dr. Lerner, who was appointed head of the Section of Dermatology in 1958, has been chairman since it became a department in 1971. A search committee for his successor is being chaired by Dr. Richard Greenspan, chairman of the Department of Diagnostic Radiology. Members of that committee include Vincent Conti, vice-president of Y-NHH; Dr. Paul Errera, professor of psychiatry; Dr. Marilyn Farquhar, professor of cell biology; Dr. Paul McCarthy, professor of pediatrics; Dr. Stephen Malawista, professor of medicine; Dr. John Moench, associate clinical professor of neurology; Dr. Jon Morrow, assistant professor of pathology; Dr. Frederick Naftolin, chairman of the Department of Obstetrics and Gynecology; Dr. Richard Stahl, assistant professor of surgery; and Dr. Joseph Weissberg, associate professor of therapeutic radiology.

A third search committee has been appointed for a chairman of the Department of Surgery to succeed Dr. Arthur E. Baue. Chaired by Dr. Paul Barash, chairman of the Department of Anesthesiology, the committee includes Dr. Joseph Bove, professor of laboratory medicine; Dr. James Boyer, professor of medicine; Dr. Joyce Gryboski, professor of pediatrics; Dr. Robert Handschumacher, professor of pharmacology; Dr. John Hobbins, professor of obstetrics and gynecology; Dr. Vincent Marchesi, chairman of the Department of Pathology; Dr. Richard Mattson, professor of neurology; Dr. Frederick Sachs, associate clinical professor of medicine; Dr. Marvin Sears, chairman of the Department of Ophthalmology and Visual Science; and Joseph Zaccagnino, executive vice president, Y-NHH.

Fourth Year Student Awarded Fellowship

Reginald Sanders, a member of the class of 1985, has been named the 1984 recipient of a Commonwealth Fund Fellowship with an award of $5000 for the fellowship stipend and research support. This program, sponsored by The Commonwealth Fund and National Medical Fellowships, Inc., is specifically designed to encourage academically gifted minority medical students to prepare for careers in academic medicine and biomedical research.

Mr. Sanders will be working with Dr. Ali Khodadoust, professor of ophthalmology, on the role of hypoxia in neovascularization using the cornea as a model.

“We all have to remember to tell our students, when they get discouraged by another long week in the lab when nothing’s worked, that the thrill when something does work is worth it all.”

Carolyn Slayman quoted in Vogue

First YJB&M Research Paper Award

The Yale Journal of Biology and Medicine presented its first Yale Journal Student Research Paper Award to Bruce K. Jacobson of the class of 1986. He was presented with a check for $1000 for the best paper based on research carried out at the School of Medicine by a candidate for an M.D. or Ph.D. degree and submitted to The Journal.

Mr. Jacobson’s paper, “Immunosuppression Following Excision of Burn Eschar and Synergistic Grafting in Major Thermal Trauma”, was based on research carried out in the Department of Surgery in collaboration with Dr. Christopher C. Baker. The paper will be published in a forthcoming issue of The Journal. A similar contest will be conducted annually.
“... it contains one Nobel laureate, George Palade, and no fewer than 17 members of the National Academy of Sciences, 11 members of the American Academy of Arts and Sciences, and 9 members of the National Institute of Medicine...”

President Giamatti to the Alumni, June 9, 1984

TWO ON FACULTY ELECTED TO NAS

Dr. Marilyn G. Farquhar and Dr. Gerhard H. Giebisch are among five Yale professors to be elected to the National Academy of Sciences at its 121st annual meeting in Washington, D.C. on May 1. Election to the NAS, one of the highest honors for an American scientist, is in recognition of distinguished achievement in original research.

Dr. Farquhar, professor of cell biology, is recognized for her outstanding research on secretion and membrane recycling in anterior pituitary and other cells. Prior to her appointment to the Yale medical faculty in 1973, she was professor of pathology at the University of California, San Francisco until 1971, when she was appointed professor at Rockefeller University. Dr. Farquhar received a B.A. degree in zoology and M.A. and Ph.D. degrees in experimental pathology from the University of California at Berkeley.

An authority on renal function, Dr. Giebisch, who is Sterling Professor of Physiology, has received numerous honors and awards for his research. Born in Vienna, Austria, he received his M.D. degree in 1951 from the University of Vienna Medical School. Prior to his appointment in 1968 as professor and chairman of the Department of Physiology at Yale, Dr. Giebisch had been professor of physiology at Cornell University Medical School.

AND TWO TO THE AMERICAN ACADEMY OF ARTS AND SCIENCES

Dr. Joseph F. Hoffman and Dr. Charles F. Stevens were among six Yale professors and 73 leading scholars, scientists, public figures and artists recently honored by election to the American Academy of Arts and Sciences. Dr. Hoffman is Eugene Higgins Professor of Physiology, and Dr. Stevens is chairman and professor of molecular neurobiology. Both are members of the National Academy of Sciences as well.

FACULTY NOTES

Dr. Samuel O. Thier has been elected chairman of the American Board of Internal Medicine for the year 1984-85. Dr. Thier is Sterling Professor of Medicine and chairman of the Department of Internal Medicine. The ABIM is the certifying body for physicians who specialize in internal medicine and in nine of its subspecialties.

The University of Rochester awarded an honorary Doctor of Science degree to Dr. Joan A. Steitz, professor of molecular biophysics and biochemistry. One of three biomedical scientists to receive the honor during the University’s School of Medicine and Dentistry commencement, she was cited for her “record of continuously outstanding research” that has provided “new insights into the translation of genetic information into proteins and ultimately into cellular function.”

Dr. Richard H. Greenspan, professor and chairman of the Department of Diagnostic Radiology, received the Gold Medal of the Association of University Radiologists for his basic research in pulmonary embolism and the application of a variety of imaging techniques. The Gold Medal is the highest honor of the AUR, presented to individuals whose contributions to the field of radiology, academics and the AUR merit special recognition.

The Class of 1983 at the University of Arizona College of Medicine invited Dr. Harold O. Conn to be keynote speaker at their convocation in May. Convocation is a special program for the College of Medicine graduates, held prior to the graduation ceremony for the entire university. Dr. Conn is professor of medicine and chief of the Hepatic Disease Unit at the Veterans Administration Medical Center in West Haven.

The American College of Physicians recognized Dr. Philip K. Bondy with an ACP Mastership for his outstanding contributions to medicine. Dr. Bondy, professor of medi-
ceive and associate dean at the Veterans Administration Medical Center, West Haven, was honored for his contributions to internal medicine as an educator, author, administrator and expert investigator. The editor of The Yale Journal of Biology and Medicine, he is known for his studies on internal secretory glands and for research in cancer. Dr. Bondy is one of about 150 of the 60,000 members of ACP to be honored with the rank of ACP master.

The American Orthopaedic Association has elected Dr. Wayne O. Southwick, professor of surgery (orthopedic) its vice president. Dr. Southwick is well known as a teacher of medical students and residents and as a research scientist. His studies on surgery of the cervical spine and the slipped capital femoral epiphysis are recognized throughout the world.

The American Heart Association, South Central Connecticut Chapter honored Dr. Ruth Whittemore as its Woman of the Year at the annual meeting in May. Dr. Whittemore, who is clinical professor of pediatrics, was cited for her outstanding contributions to the American Heart Association in the field of pediatric cardiology.

For their research paper entitled “Air Quality in Buildings During Smoking and Nonsmoking Occupancy”, Drs. Brian P. Leaderer and William S. Cain received the Crosby Field Award of the American Society of Heating, Refrigerating and Air Conditioning Engineers. Dr. Leaderer is associate professor of epidemiology and public health and Dr. Cain is associate professor of epidemiology and psychology. Both are associate fellows of the John B. Pierce Foundation Laboratory as well. Their work was reported in the Spring 1982 issue of Yale Medicine.

Dr. Robert Shulman, professor of molecular biophysics and biochemistry and chemistry was presented the Gold Medal Award of the Society of Magnetic Resonance for his creative research in the application of nuclear magnetic resonance spectroscopy to biomedical and clinical research. He was corecipient of the award with Dr. George Radda of Oxford University, during the annual meeting of the Society of Magnetic Resonance in New York on August 14.

Dr. Kyle Grazier, assistant professor of epidemiology and public health, is one of five Fellows selected for the first class of the Robert Wood Johnson’s Program for Faculty Fellowships in Health Care Finance. The purpose of the program is to develop outstanding university faculty with the skills needed to teach and conduct research in the rapidly changing field of health care finance, such as DRG’s, PPO’s, rate setting and others. Fellowships begin at The Johns Hopkins Medical Institutions with an intensive three-month study of the latest innovations in health care finance. During the following nine months, Fellows will have a structured field and research experience in a public or private health care financing organization.

The 20th Annual Meeting of the New England Public Health Association held this past spring was dedicated to Dr. Ira V. Hiscock, Anna M.R. Lauder Professor Emeritus of Public Health.

MARY ELIZABETH McGARRY, M.D.

Dr. Mary Elizabeth McGarry, assistant clinical professor in the Child Study Center and pediatrics, died in the Yale-New Haven Hospital on July 5 at the age of 63. She was a native of New Haven and a graduate of Albertus Magnus College and the Tufts University School of Medicine. She did her internship at Children’s Hospital in Boston.

Dr. McGarry held appointments in the Yale Department of Pediatrics from 1957 to 1961. She was then appointed as an instructor in the Child Study Center and subsequently as a research associate. Since 1969 she has been as assistant clinical professor.

In addition to her pediatric activities, she was a member of the New Haven Symphony Associates and the New Haven Council of Catholic Women. She was the widow of Dr. John C. McLaughlin and is survived by their two sons.

JOSEPH MIGNONE, M.D.

Dr. Joseph Mignone, assistant clinical professor of medicine, died on July 5 in Yale-New Haven Hospital. He was 75 years of age and had practiced medicine in New Haven for 45 years prior to his retirement in 1981.

Born in New Haven in 1909, he attended Yale where he received his bachelor’s degree in 1930 and his M.D. degree in 1933. Following house staff training at Duke University Hospital and the New Haven Hospital, he entered practice in 1936. During World War II, he served as a medical officer in the U.S. Navy and saw active duty in the South Pacific and Philippines.

Dr. Mignone was first appointed to the Yale School of Medicine faculty in 1941 as a clinical assistant in medicine. On his return from military service in 1946, he became a clinical instructor, and in 1956 he was promoted to assistant clinical professor of medicine. He was a member of the attending staffs at the Yale-New Haven Hospital and at the Hospital of St. Raphael, where he was chief of medicine from 1943 to 1977 and served as president of the staff from 1967 to 1968 and director of ambulatory services from 1971 to 1976. He was president of the New Haven Heart Association from 1952 to 1954.

He is survived by his wife, Louise, and by his son and daughter and four grandchildren.
Universities do not only promote change; they also maintain continuity. To maintain the interplay between continuity and change provides the challenge in this unique environment. Although we generally regard the faculty as the stable component of the university enterprise, it too is remarkable for change. Every year numerous members of the faculty are recruited, and numerous others leave—some for other universities or careers, others by dint of retirement. But this changing faculty scene involves much more than the names or ranks of people on the roster. The research questions this faculty asks, and the means they employ to answer the questions they raise about the mysteries of health and disease are continually being modified. Likewise, the body of information which the faculty must transmit to students is anything but static. This is particularly true today as the dramatic advances in cellular and molecular biology, in genetics, in immunobiology, and in neurobiology affect not only the basic fountains of biomedical thought, but also the means by which disease is detected, treated and prevented.

But this year the Yale School of Medicine changes in a way (fortunately for me as President) which occurs quite infrequently. As you all know, 1984 marks the end of Bob Berliner’s term as Dean of the School of Medicine and the beginning of Dean-Designate Lee Rosenberg’s elevation (in my view at least) to this most important post. As these two good friends accomplish this transition upon which we all depend, it is fitting for me to mention some things about them.

Bob Berliner came back to Yale as Dean in 1973 after an illustrious scientific and administrative career at the National Institutes of Health. His 11 years as steward at Yale’s School of Medicine have been outstanding ones. Let me remind you of Bob Berliner’s notable accomplishments as Dean:

- He has recruited more than half of all the men and the first woman serving (or soon to serve) as chairs of the School’s 22 departments and sections;
- He has helped secure the funds for the Nathan Smith Bridge building which joins the old New Haven Hospital unit with Sterling Hall, and which houses key components of the Department of Human Genetics and the Comprehensive Cancer Center;
- He has resisted the temptation to demolish this old, proud and beautiful Hope Building, choosing instead to turn it into a much needed (and now much enjoyed) teaching center;
- He has helped bring major private support to the School through such programs as the Howard Hughes Medical Institute in Immunology and the Bristol-Myers affiliation with Pharmacology;
- He has sustained and strengthened a strong working relationship with Yale-New Haven Hospital—a bond critical to the success of the entire venture;
- He has managed the School’s finances such that student tuition here now ranks 45th in the country, while at the same time mounting the already mentioned new programs.

For these accomplishments and much, much more, the University, the School, and indeed the country owe Bob a great but unpayable debt.

But what of the man to whom the University now entrusts the leadership of this strong, complex school? Having chaired the committee responsible for selecting Lee Rosenberg, and having had the good sense to recruit him successfully, I am pleased to describe him to those of you unfamiliar with this man. He is the C.N.H. Long Professor; he built one of the finest departments of human genetics from the ground up; he is nationally recognized as a national spokesman on matters of medical science and has the trust and admiration of colleagues throughout our School and the country.

And, so, in a few weeks, and in the unobtrusive way institutions of learning change their helmsmen (or perhaps more appropriately, their orchestra conductors), the venerable Yale School of Medicine will have a new Dean. I know he does not need to be reminded of the strength of the place or its
problems, but I believe it is right that I take the remaining moments to reflect with you — to whom, after all, this School also belongs in trust — in the state of the place.

Very often (perhaps too often), university Presidents are pictured as waking up in nightly cold sweats thinking about the insoluble problems of their massive, cacophonous Medical Schools. I cannot tell you that the Yale School of Medicine never provokes such restlessness for me, but I must remind you of the other side of that coin — the enormous strength of the place which derives first and foremost, from the remarkably intelligent, devoted, and entrepreneurial faculty by whatever objective criteria one can employ:

it contains one Nobel laureate, George Palade, and no fewer than 17 members of the National Academy of Sciences, 11 members of the American Academy of Arts and Sciences, and 9 members of the National Institute of Medicine;

it, as a whole, has competed so successfully for NIH research and training funds as to rank among the top three medical schools nationally in each of the past five years;

it has responded to the challenge of providing exemplary clinical care by adding new programs in transplant surgery, in fetal medicine, in clinical epidemiology, and in gerontology;

it has added new courses to the medical curriculum in immunology, genetics, and neurosciences and has continually strived to modify the curriculum so as to reflect the ever changing nature of medical thought and practice;

and it has reached out to house officers, postdoctoral fellows, community physicians, foundations, governments and businesses to share its experience and educate practitioners, scientists, and legislators alike.

But it has done all this with insufficient resources. That problem, members of the alumni, you and I must help solve. Two years ago, I appointed a special development advisory committee for the School of Medicine chaired by George Palade and including among its members Bob Berliner, Lee Rosenberg, Sam Thier, Arthur Baue, Jan Stolwijk, Alan Sartorelli, and Art Ebbert. A year ago, I reported to you that this committee recommended that the University mount a major fund raising campaign for the School of Medicine — the first such campaign in the School’s history. I endorsed that recommendation and I expect my recommendation for the campaign to be approved by the Corporation next week.

I am most pleased, one year later to have the opportunity to bring you up-to-date on this issue, which, I think is central to the future of the medical school. First, the campaign target has been set at $125 million and the campaign duration projected at five years. Second, we have recruited a dean, Lee Rosenberg, who has an appetite for this endeavor, and a director of development, Sue Dorn, who is recognized as among the most outstanding institutional development officers in the country. Third, we have commissioned a New York firm to prepare and deliver the case statement for the campaign by September 1, 1984. Fourth, the goals of the campaign have been honed. The principal needs include: some $40 million in endowment funds to buttress the School’s foundations; funds totalling $30 - $40 million to erect a Magnetic Resonance Center, a Faculty Practice Plan building, and a new 50,000 square foot research building aimed at blending fundamental and applied research interests toward the molecular basis of medicine; several millions of dollars toward student financial aid expected to take the form of scholarships, fellowships, and low interest loans; and the remainder to accomplish such tasks as library renovation, new faculty seed funds, and senior faculty equipment replace-

"This is an effort for all of us. And I expect the campaign to succeed..."

— President Giamatti
**ALUMNI NEWS**

**ALUMNI WEEKEND 1984**

distinguished senior alumni were recognized . . .

Dr. Arthur Griswold, left, and Dr. Helen Langner of the Class of '22.

Dr. Myron Sallick, left and Dr. David Raskind, both members of the Class of 1924, which celebrated its 60th reunion.

Dr. Harry Zimmerman '27, center, with Mrs. Zimmerman and a friend.

**ASSOCIATION OF YALE ALUMNI IN MEDICINE**

**annual business meeting**

The meeting held in the Jane Ellen Hope Building was chaired by Dr. Nicholas Spinelli, president. After recognition of distinguished senior alumni in the audience, special recognition awards were presented to those members present of the 50th year class of 1934.

Dr. Robert Berliner was introduced and expressed his sincere appreciation to the alumni for their support during his eleven years as dean. Later in the meeting, Dean Berliner gave a brief historical account of the Hope Building and announced the dedication of the restored amphitheater to the alumni. He said, "Henceforth, this room will be known as the John B. Ogilvie Alumni Amphitheater, named after a distinguished alumnus, who is a member of the great class of 1934. It gives me great pleasure to announce this at this final meeting with you in my role as dean of this great school."

Dr. Spinelli then surprised the dean. On behalf of the Association of Alumni in Medicine, he presented Dr. and Mrs. Berliner with lifetime membership and the privilege of participating in all future activities. In presenting this warm, sincere expression of appreciation, Dr. Spinelli noted, "Our gratitude for your service to our school, its students, and its alumni cannot be adequately conveyed."

Distinguished Alumni Awards in the form of Yale chairs with suitably inscribed plaques were then presented by Dr. Spinelli to Dr. Leona Baumgartner and Dr. Ogilvie. They in turn each made a brief but moving statement of appreciation to the School of Medicine noting, in each case, what a Yale medical education had done to further their careers.

At the conclusion of the business meeting, Dr. Lowell Goodman gave a report on the Medical School Alumni Fund 1983-84 annual giving campaign, and Mrs. Kathleen Howe presented an optimistic report for the Public Health Alumni Fund.

Elections were an earlier part of the business meeting. On recommendation of the Nominating Committee chaired by Dr. Thomas Kugelman, the following were elected to serve on the Association's Executive Committee, each for a term of two years: Gilbert Hogan ('57), John Pastore ('67), Rebecca Solomon ('39), Ora K. Smith ('53), and Lynn T. Tanoue ('82). In addition, Alexander Gaudio ('63), was elected as a representative to the Association of Yale Alumni (AYA) Assembly.

Following the elections, Dr. Spinelli congratulated the newly elected and expressed appreciation to those going off the Executive Committee, Leonard Kehler ('43), Richard Norton ('60 HS), and O'Dell Owens ('76), and to Carol Goldenthal ('44) who had served as a representative to the AYA. He also noted that he hoped these dedicated alumni would participate in Association activities in the future.
as were members of the great Class of 1934

Citations and Yale Chairs were bestowed on Dr. Leona Baumgartner and Dr. John B. Ogilvie, by the Dean and Faculty and The Association of Yale Alumni in Medicine.

Cordial greetings were sent to the members of The Class of 1934 by the Dean and Faculty of the Yale School of Medicine:

"You left Yale in the turmoil of the great Depression. As you completed your training, the country became embroiled in war. Your country and the world have survived these and lesser crises and conflicts. In the fifty years since your graduation, these vagaries of life have not deterred you from your great contributions as clinicians, scholars, academicians, scientists and public servants.

"Like you, your University and its School of Medicine have weathered the storms, and have continued to gather on its Faculty outstanding individuals in research, education, and clinical medicine.

"Yours was the privilege to learn from and follow in the footsteps of the great leaders on the Faculty a half-century ago.

"Today, new leaders are gathered together to constitute the Faculty of the University and the School of Medicine. They note with great pride the honor and esteem your illustrious lives have brought to Yale. Though your ranks have thinned from 33 to 22, your light shines bright at this half century mark.

"We salute you."

To John B. Ogilvie, M.D.

"... your continued and regular support of annual giving has been a model for many to follow. The students who have profited by your generous support of the Student Loan Fund are many, and their gratitude is unmeasured. Most recently, you became aware of funds needed to complete restoration of the Hope Building, specifically the old amphitheatre so etched into the memory of medical students of the long past. Your generosity was responsible for the completion of that project, now a teaching center of beauty and utility, as well as nostalgia.

"By these deeds, you have demonstrated a loyalty unmatched and without bounds. The fruits of your wisdom and the fruits of your fiscal generosity have helped in maintaining exemplary programs appropriate for Yale."
REUNIONS

1929

55th
The ranks of the class of 1929 are depleted but those who turned up for the 55th reunion seemed to be remarkably fit. Those in attendance were Frank D’Andrea, George Goldman, Vernon Lippard, Russ Scobie and Bob Tennant.

Although the temperature hovered around 90 degrees, the meetings were comfortable in the recently renovated and air-conditioned Hope Building. (Remember when that was the New Haven Dispensary?) Features of the meetings were an interesting address by President Giamatti and seminars on topics such as the immunological mechanisms in desensitization and recombinant DNA, which were never heard of when we were students.

We assembled for dinner at the Graduates Club where the unplanned entertainment turned out to be the portraits of the entering class taken in September 1925. Of the 55 in the group, 38 graduated on schedule in 1929. Seventeen of that number survive. We were saddened to hear of the recent death of Tony Liehm.

Vernon Lippard

1934

50th
On June 8 and 9, the class of 1934 (Yale’s best class!) reunioned in New Haven. Those attending were Leona and Alex Baumgartner, Joseph and Rose Budnitz, Herbert and Polly Miller, John and Donna Ogilvie, Harry and Ida Sherman, Wedgewood and Ann Webber and Knowles Lawrence.

An elaborate, interesting program was prepared by the Medical School and Alumni Association.

Three seminars of general interest were presented: a Yale Alumni-in-Surgery seminar was presented by the class of 1939, and the class of 1944 contributed significantly to the program under the guidance of Nicholas Spinelli. The business meeting was featured by the awarding of the new Alumni in Medicine Distinguished Service Awards to Leona Baumgartner and John Ogilvie. Dr. Berliner announced that the restored amphitheater in the Hope Building would be called the John B. Ogilvie Alumni Amphitheater. Proper acknowledgement was made to Leona Baumgartner for her generous matching fund gift to the Alumni Fund, which has stimulated contributions to record levels.

A gourmet luncheon of lobster and roast beef on Saturday was followed by a performance and lecture on Japanese Noh drama theater by Howard Hamilton (’44). In the course of the weekend a reception was held for Dr. and Mrs. Berliner. The new dean, Dr. Leon Rosenberg, was introduced. All decided that the Medical School has been, and will remain, under excellent guidance.

After dinner at the Graduates Club, the Class of 1934 dispersed and will reunion again in 1989.

It is impossible to thank all the individuals who made this reunion as successful as it was. But great appreciation exists for the thought, effort and expense of producing an excellent Alumni Weekend.

John Ogilvie

1939

45th
The distinguished class of 1939 enjoyed their 45th reunion on June 8 and 9. The members present were Harold and Estelle CooperSmith, Joseph and Livia Forman, Jerome and Phoebe Greenfield, Nathaniel and Esther Kenigberg, Ernest and Dene Sarason, Darrell and Catherine Voorhees, Stuart Stevenson, and J. Wheeler MacDonald, the Arthur Tuckers, and Paul Huston.

The peak day of activity, Saturday, had all of us enjoying varied, truly exciting seminars in the morning, followed by the school reunion meeting with delightful speakers. We then repaired to a sherry hour followed by a bountiful repast. Thereafter, some toured the new, impressive facilities at the Medical School, while others toured the Yale Center for British Art. Stu Stevenson, however, had to return to New York at this point.

Following a brief repose, we gathered at the Woodbridge Country Club for cocktails and candlelight dinner, where we were free to swap tall tales and short fabrications. We all recalled anecdotes of many individual members of the class who did not attend, and read letters from Norm Cressy, John Ferguson, Pete Murphy, and Doug Walker, regretting their absences.

The assembled group, in turn, regretted not having more of our members present. But we plan an even larger turnout, in what seems like a short time these years, for our next togetherness.

Joseph B. Forman

1944

40th
Twenty-three members of the class of 1944 attended our 40th reunion in New Haven last June 8th and 9th, and we felt it was the best ever of many memorable reunions. There was a feeling of a comfortable family group even more than ever before. Five years ago Reese Matteson attended for the first time and enjoyed it so much that he regretted all the previous reunions he had missed.

This year Jerry Kaye and Reuben Zucker had the same reaction. An additional factor that made this reunion even more our own is that Nick Spinelli is the President of the Association of Yale Alumni in Medicine. He was chairing just about everything, and in a very masterly way, especially noticeable when unforeseen circumstances arose.

Nick had done a very sensitive job in preparing the reunions for the whole school, but particularly ours. As at our last reunion, we were the only class with a Reunion Seminar on Friday, open to and attended by many others besides our class members. We also have a star performer in Howie Hamilton, who gave a Noh demonstration and lecture with slides in the Harkness Auditorium Saturday afternoon, open to everyone. Our class’ reunion gift to the School of Medicine amounted to $20,000, also a record. It seems that our class is, and is recognized as, outstanding in every way. Who would have foreseen this, seeing a bunch of young Army recruits back in 1943?

Most of us were domiciled together at Silliman College, which for me was full of atmosphere, and very like the College at Oxford where I spent a week last summer. Many arrived on Thursday evening, and on Friday morning we got together, about 15 of us, to hear what we all were doing. Bob Frelick, who is now at the National Cancer Institute, and the inimitable Ronnie Losee, gave presentations with slides. The others who were there reported extemporaneously. That afternoon in our Seminar, Larrys Crowley and Pickett, both deans at medical schools (Stanford and Yale) spoke about problems of medicine in the U.S., now and in the future, with Larry Pickett specifically explaining the Yale picture. Then Russ Monroe spoke about “Genius and Madness”, a subject he has been researching and writing about, and then I (Edith) spoke about the use of mental imagery in the treatment of physical and mental illness.

A reception was held on the top floor of the new Hope Building in honor of
Dean Berliner, who is retiring this July. Even in a job which requires one to refuse a lot of requests, Dean Berliner has endeared himself to all who have had the privilege of working with him. Nick had invited the whole class to be his guests at Lecon’s for dinner Friday evening, but there was a strike of their employees. So instead, we went to a restaurant on the shore for an extensive seafood dinner.

Saturday morning there was a choice of three seminars. I attended the one where Howie Hamilton and Stu Finch described their work in Hiroshima researching the long-term effects of the atom bomb. That afternoon, Howie got dressed up in a georgeous costume made of silk so heavy it can stand by itself, and illustrated the various categories of the Noh drama. The masks used to depict the characters are real works of art, and one thought there was a real Japanese actor behind them. Howie had the typical growling sound of some of the Japanese language, the unique, slightly bent forward stance, and the leg work down perfectly.

Our class dinner was at the Graduates Club, and it was a very warm, congenial affair. We had an extemporaneous performance by Corky which had us all in uproarious laughter for half an hour. Nick was asked to fill in information about those who were not present, but had written. He stood in front of the big fireplace with a lot of papers in his hands, but one side of the room said they could not hear. So, Corky got up and interpreted for that side. A professional comedian could not have done nearly as well. As the evening wore on, someone asked me “What are we going to do tomorrow?” We dispersed on Sunday, but if you all wish, I will plan to have a Sunday program at my house in five years.

Those who attended the reunion, almost all accompanied by spouse, were Conway, Coolidge, Corcoran, Countryman, Crowley, Doherty, Frelick, Goldenthal, Hamilton, James, Jurka, Kaye, Losee, MacKenzie, Martin, Matteson, Monroe, Pickett, Roth, Spinnell, Taft, Zucker. Special guests were Donald Dock and his wife. Edith Jurka

1949

35th

The class of ’49 reunion activities were mainly dinner at the Graduates Club. Present were Bill Anlyan with his aunt; Harry Baird with wife Nora; Peter Cunningham with wife Jan; Gunnar Eng with wife Connie; Paul Goldstein with wife Betty; Nora Gordon with husband Harry; Dan Halvorsen with wife Maxine; Dick Otis with wife Mary, and Martha Vaughan with husband Jack.

Majority present have children and grandchildren in various configurations. A few have retired; most still working. All locally or nationally famous. Proposal to have a class conversation to report on our unique contribution to American medicine is in review, and you may hear more from this.

William Anlyan, chancellor for health affairs at Duke, has been named to the Council of the University-Government-Industry Research Roundtable, a 13-member committee newly created by the National Academy of Sciences for the purpose of looking after science’s interests in Washington. Funds for the Roundtable have been provided by the Alfred B. Sloan Foundation and the Andrew W. Mellon Foundation. Frank Press, president of the Academy, has said that the Roundtable “offers an opportunity to address questions bearing on the health of American science in a manner not previously available.”

DeWitt Baldwin is now president of Earlham College, a four-year Quaker liberal arts institution in Richmond, Indiana. Previous to his appointment in the spring of 1983, he had served as professor of psychiatry and behavioral science and assistant dean for rural and community health at the University of Nevada School of Medicine, as well as director of the Center for Geriatric Education and Research. He added that he is also serving as chairman of the Behavioral Sciences Test Committee for the Part I Examination of the National Board of Medical Examiners and serves on that Board.

1954

30th

After several days of attending Alumni Weekend seminars and receptions, comparing present day New Haven with the New Haven of 30 years ago, attending the Japanese Noh drama performance, etc., nine members of the class of 1954 met for dinner on Saturday evening, June 9, at the Graduates Club.

Those attending were Alan and Sylvia Covey, Jack and Elaine Gariepy, Frank and Bette Gruskay, Lowell and Barbara Olson, Anthony and Jeanne Piccirillo, Robert and Anita Stein, and Herb Hurwitz, who escorted a lovely daughter, Diana.

We enjoyed an excellent dinner, had an opportunity to visit, read letters from Edward Gerety, Jacques Quen, and John Rose, and I am certain everyone made a firm resolution to return for our 50th in 2004.

Lowell E. Olson

1959

25th

The story of the silver anniversary of the Yale Med Class of ’59 really began in a dimly lit room at the rear of Mory’s Tavern around the first of the year. There a small group met for supper and wine (selected from Mory’s “private” stock) to organize and implement a plan for the greatest reunion that a class known for its superlatives ever had.

Nick Passarelli, Kris Keggi, Herb Kaufman, Joe Saccio, John Marsh, and Marc Schwartz planned (and drank) well. Then, in the ensuing months, they took a lot of time to make arrangements and personally phone every member of the class to urge them to come back to New Haven. The response was tremendous! We recorded the best attendance ever for a 25th reunion class: 50 of our members gathered from the four corners of the United States to enjoy a wonderful two days of fun and fellowship; Mal and Audrey Ing from Hawaii, Lyall and Phyllis Crary from Washington, Rae Larsen and Line Potter from Florida and a cast of thousands from the northeast.

The official functions began Friday. That afternoon all the talent for a seminar entitled “Yale Alumni in Surgery” was supplied by the Class of ’59. In turn, the attendees were enthralled by moderator Passarelli, Keggi on “Non-Cemented Ceramic Hip Replacement”, O’Neill on “Surgical Management of Hypertension in Children with Vascular Abnormalities”. Butterfield
proceeded through prime rib and asparagus and finished with Bananas Foster while Pat Dorn's band, without an amplified guitar in sight, serenaded us with favorites from the the '50s.

After supper, while the band took a break, we gathered around the dance floor. Nick began with a moment of silence as we remembered our deceased classmates: Dick Gershon, Bill Edwards, Rog Atwood, Bob Davis, Phil Griffin, Arl Pond and Tony Warner. Then Marc Schwartz settled himself at the piano to lead a singalong of old favorites from the Senior Show of the Class of '59, "Day-O, Spend All Nite on OB Ward" and "That's All There Is, We Hope You've Had a Ball or Even Two". Between numbers various members of the original cast recreated their roles using a musty, yellow, old script supplied by Marc. Perhaps the most hilarious routine of the evening was performed by Pogo, Nick and Kauf as they slid their glasses up and down their noses simultaneously while attempting to read the faded print. John Marsh, Bob Fisher, and Bob Amick harmonized their VA number again as we all realized that time doesn't change some things — such as our appreciation of the special experience we had at Yale.

The attendees were: Bob and Carol Amick, Ace and Jean Barnes, Frank and Gwen Beer, Jack and Edie Bowers, Bill and Ellie Butterfield, Sid and Phyllis Cohen, Lyall and Phyllis Crary, Ed and Franny Clayton, Marty Colodzin, Ron and Louise DeConti, Bob and Susie Fisher, Paul Friedman, Bob, and Lorraine Gonyea, Gerry and Lois Gordon, Vera Glocklin, Rod and Nancy Hartmann, Bill and Joan Heydorn, Len and Judy Inker, Mal and Audrey Ing, Bill and Ann Jablonski, John and Mary Ann Jasaitis, Ed Kaminskas, Herb and Nancy Kaufmann, Kris and Julie Keggi, Dave and Ginny Kingsbury, Rac Larsen, Ray and Sally Mark, Dan and Maritza Macken, John and Carol Marsh, Brian and Judy McGrath, Kent and Rosemary Morest, Pete and Joy Molloy, Ron and Pat Morris, Jim and Sue O'Neill, Bob and Freda Ostberg, Nick and Mary Lou Passarelli, Linc Potter, Jim and Bunny Prokop, Jack and Lou Poglinco, Dave and Joan Reed, Joe and Carol Robinson, Joe Saccio, Rudi at and Anne Schwartz, Dick and Clare Senfield, Dave and Ellie Skinner, Sandy and Naomi Solomon, Jim Stagnone, Lisa Steiner, and Mimi and Dick Wolf.

Malcolm Ing wrote from Honolulu in March that this year has been very busy for him in that he has been recently appointed chief of ophthalmology at the John A. Burns School of Medicine, University of Hawaii, and also elected president of the Hawaii Ophthalmological Society (State society of ophthalmologists).

1964 20th

Despite the torrid New Haven climate, the ever-present overtures for contributions, and the war-zone atmosphere around Leon's Restaurant, the class of 1964 20th reunion was an unqualified success.

Alumni “traveling the farthest” awards went to Al Morris (Salt Lake City), Tony Alonso (Tampa), and Skip Stilp (Neenah, Wisconsin).

The “best preserved” (without the use of artificial substances) accolade went to Dick Hockman, who on several occasions during the evening was mistaken for a busboy.

Class scribe, Joe “Nautilus” Curi, won the physical fitness prize for weighing less than in his original application photograph.

The "where is your kid in college?" medals were swamped by Diane Shrier (daughter at Yale), Tony Bravo (son at Harvard), and Bob Briggs (daughter at Princeton).

The Bacchanalian feasting was only interrupted by the academic “turks” who insisted on checking periodic blood alcohol (Lew Landsberg), cholesterol (Virgil Brown), and colony count (Bob Lyons), levels.

Later, John Haney and Mary DiGangi led a soul searching, nostalgic group therapy session. Fortunately, Lee Berger misplaced his interesting collection of class radiographs of the early 1960's.

At the close of the festivities, Sid Baker supposedly returned to the Gesell Institute to redefine the effect of a Yale Medical education on early childhood behavior patterns.  

Joseph F.J. Curi
1969

15th

The class of 1969 gathered at Morv’s for their 15th reunion and we were amazed at how little any of us had really changed and how much we all felt for each other. For those of us present it was a time of reminiscing, rhapsodizing, and renewing and in retrospect, perhaps the closest Yale ever made us come to the three R’s. But we did learn to cut the meat, so here goes.

Charles Angell and Sandy and their children, Leah and Jordan, live in Baltimore where Chuck practices cardiology and internal medicine. Seth Charny came in from San Francisco where he practices psychiatry and has become a real estate maven. Leo Cooney and Kathleen live in New Haven with their boys, Timothy and Joshua. Leo does rheumatology and geriatrics as well as is father manager of the Yale Youth Hockey team. Lee Jampol with Carol lives in Chicago with their children, Melissa Lyn and Scott. Lee was named chairman of the Department of Ophthalmology of Northwestern. At the dinner, Lee was also given special thanks for his work for the Alumni Fund.

Stephen Krant is a plastic surgeon in La Jolla, California, and if things ever get slow could moonlight as an emcee, our dinner. He was pinch-hitting for based on his performance in that role at La Jolla. Mike Liebowitz and Rowena Korobkin did not attend but sent letters. Both are married. Rowena is in practice in San Francisco in pediatric neurology and Mike is in New York doing research in psychopharmacology.

Those of you not here were remembered and talked about. The class network surprisingly was able to keep track of everyone one way or another. Although all present were happy with what we were doing in medicine, we were all concerned about the future of our profession. Several strategies for coping were suggested. Richard Pollis was still touting gold as he did at his high at our 10th reunion. Seth Charny from his experience in the Bay area was cautiously advising real estate. Dave Schulak analyzing the new hip prostheses suggested that we consider rhodium. In the end we figured we would still mainly practice medicine as best we could and would return for our 20th reunion happy but still pessimistic about the future of medicine as most likely all of our predecessors have done at these same reunions.

G.J. Smallberg

1974

10th

Our tenth reunion was held in New Haven during Medical Alumni Weekend on June 8 and 9. Despite the 100 degree heat and 100 percent humidity, those of us able to attend enjoyed renewing old acquaintances. Several members of our class were fortunate to attend a reunion dinner at Casa Marra on Saturday. Kudos to Lenny Banco who made all the arrangements and even managed to come in under budget.

Lenny is director of Pediatric Ambulatory Services at Hartford Hospital (U.Conn.faculty). He and Liz have an 8-year-old daughter, Elise, and a 5-year-old son, Jonathan. Roger Emerson is an orthopedist at Mass. General and Cambridge Hospitals. He and Patricia have an 8-year-old daughter, Caroline, and a 3-year-old son, Christopher. Daniel Rosenthal is a radiologist at Mass. General. He and his wife, Jacqueline have a 13-month-old daughter, Lillian.

Irl Extein will soon (September 1) be medical director of Psychiatric Institute of Del Ray (Fla.). He and Barbara have two or three children (depending on when you read this).

Doug Berv is a psychiatrist in New Haven. He and his wife, Cheryl have a young son, Ed Janosko, who has become an avid pilot, is a urologist in Greenville, North Carolina. Ron Neumann is associate professor of radiology and pathology at Yale. His wife, Maria, is also on Yale’s pathology faculty. I am a geneticist based at San Francisco Kaiser. Carol and I have a 2 and a half-year-old son, Scott, and a 9-month-old daughter, Catherine.

Neil Blumberg is Blood Bank director at University of Rochester and Peter Buchin is a gastroenterologist in Manhattan. Also up from New York for the day was Harry Shamoos with his wife and two sons. Bob Milstein is a psychiatrist at Yale.

Many members of our class were unable to attend our reunion, but the following rumors were circulated; I apologize for any inaccuracies. Jason Zielonka is in nuclear medicine in Milwaukee. Boston is home to Dick Pasternak, cardiologist. Jim Strom, nephrologist; and Maisie Tam, dermatologist. Amy Schechter, pediatrician; Bob Schecter, ophthalmologist; and Ross Tonkens are in the L.A. area. Bob Hempton is a hand surgeon in San Diego. Fred Shessle is a urologist in Atlanta.

The Pacific Northwest is home to Dick Howe (Oregon) and Carol Teitz, an orthopedist in Seattle. The San Francisco area finds Steve Arnold; Tom Munyer, Dani Goldwater, Rich Cazan, gastroenterologist; John Schrumpf, radiologist; David Ritvo, psychiatrist; and Marce Ota, orthopedist. Mike Gerber is a pediatrician in
Connecticut. Infectious Disease is the specialty of George Talbot in Philadelphia and Andy Mayer, who will soon be moving from New Haven to Baltimore.

Information about other classmates is sketchy; some of you seem to be lost to follow-up. I hope to see or hear from more of you at future reunions or sooner.

Bruce Blumberg

1979
5th
No report received

OTHER CLASS NOTES

1943

Ralph Alley received the degree Doctor of Science Honoris Causa from the Albany Medical College at commencement exercises in May. A member of the faculty since 1952, he is a clinical professor of surgery and former head of the Division of Thoracic Surgery at the Albany Medical Center. He was cited for his exemplary career in thoracic surgery and for his many contributions to the field, both in scholarly publications and in innovative surgical techniques.

1946

Ruth Kempe and her husband, C. Henry Kempe ( '48 HS) have written a book, "The Common Secret", which deals with sexual abuse of children and adolescents. It considers the difficulties in coping with one's personal feelings about the occurrence of sexual child abuse which face all who have to deal with it: social workers, physicians, nurses, police, psychologists, teachers, the clergy, and the public. The frank but positive discussion of a subject once considered taboo helps explain the 200 percent increase in reported cases of sexual child abuse since 1976 and sheds new light on the role professionals can play in this frightening dilemma.

Robert Wagner has recently been appointed director of the Cancer Center at the University of Virginia Medical Center in Charlottesville. He also will continue to serve as chairman of the Department of Microbiology.

1950

Sidney Lee has resigned as president of Michael Reese Hospital and professor of medicine at the University of Chicago to accept the appointment as president-elect of The Milbank Memorial Fund in New York City, effective in the fall of 1984. He claims that this will be his last move. Sid's two sons, Jonathan and Michael, will both be entering medical school this fall, at Georgetown and McGill respectively.

Classmate Russell Anderson recently visited Sid at Michael Reese as the head of an Accreditation team for the Joint Commission on Accreditation of Hospitals.

1951

The 1983 American Journal of Ophthalmology Lecture was delivered by Bradley Straatsma at the XIV Pan-American Congress in Lima, Peru. He spoke on "Cataracts — Clinical and Biochemical Correlations" and provided new insight to the biochemical nature of cataracts as it is related to the clinical appearance of the lens opacities.

Dr. Straatsma is director of the Jules Stein Eye Institute, and professor and chairman of the Department of Ophthalmology at the University of California at Los Angeles School of Medicine.

1955

Milton Corn was appointed medical director and chief of staff at the George- town University Hospital in Washington, D.C., effective July 1984. He will continue to serve as professor of medicine at the School of Medicine.

James Nolan has been appointed governor-elect of the American College of Physicians, Upstate New York Region. He is professor and chairman of the Department of Medicine at State University of New York at Buffalo, where he has been a member of the School of Medicine faculty for 21 years.

Dr. Nolan is also director of the Erie County Medical Center's Department of Medicine and chairman of the board and president of Research for Health in Eric County, Inc. A Buffalo native, Dr. Nolan his wife and four children live on Burbank Drive in Snyder, New York.

1957

Joseph Pagano, director of the Lineberger Cancer Research Center at The University of North Carolina School of Medicine, Chapel Hill, participated in the dedication of the Cancer Research Center's new $9.4 million building in May.

Clifford Reifler, medical director of Strong Memorial Hospital of the University of Rochester Medical Center and director of the University Health Service, has been elected to membership in the American College of Physician Executives. Dr. Reifler's selection was based on his "clinical excellence, formal management education preparation, and leadership excellence."

A member of the Rochester faculty since 1970. Dr. Reifler is professor of psychiatry, of health services, and of preventive, family and rehabilitation medicine.

1961

Kenneth Arndt has been appointed new chief editor of Archives of Dermatology. In the announcement of his new position, Dr. Arndt was cited for his achievements, and it was noted that he is widely regarded throughout the profession as one of the premier academic clinicians in dermatology in the country. "Dr. Arndt brings to his new position impressive credentials in medicine, medical journalism, and teaching. Although he is best known for his pioneering research in laser technology and for his authorship of the Manual of Dermatology — considered by physicians the world over to be the 'standard work' in dermatology — he is also a generalist with experience and expertise in a variety of areas . . . Archives of Dermatology recently observed its centennial year. The appointment of Kenneth Arndt ensures the continued excellence of this prominent journal into its second century of publication and marks a new era of vigorous leadership."

Earl Baker was elected to a two-year term as president-elect of the American Heart Association South Central Connecticut Chapter at the Association's annual meeting in May.
This past March, Philip Felig was appointed president of the Sandoz Research Institute in East Hanover, New Jersey. This institute has been organized to facilitate closer interaction with academic research centers throughout the country and broaden the base for future preclinical and clinical research at Sandoz. Dr. Felig, who has been a member of the Yale faculty for the last 14 years, will continue his association with the School as a clinical professor of medicine.

1965

John Barchilon, now living in California, wrote in April updating his most recent activities. He noted that: "I've always wanted a chance to see the country before moving out west, so I joined a practice management/locum tenens group based in North Carolina, and they sent me all over. It was a terrific experience, practicing in small towns in South Carolina, Georgia, northern Connecticut, Illinois, and Montana — especially coming from Manhattan. "Now settled in Los Angeles, he divides his time between practicing sports medicine and writing.

Between assignments last year, he was able to finish a novel, "The Crown Prince", a story of love, war, and music based on the life of the legendary concert pianist Paul Wittgenstein. The novel set in Europe from the nineties through the twenties portrays kings, courtesans, soldiers, scoundrels, artists, and rabble rousers during these turbulent years.

1966

Henry Hanley, currently professor and head of the Section of Cardiology in the Department of Medicine at Louisiana State University, and chief of the Cardiology Section of the Medical Service at the Veterans Administration Medical Center in Shreveport has been elected to Fellowship in the American College of Cardiology.

1967

John Pastore is currently serving as secretary of the International Physicians for Prevention of Nuclear War and attended the organization's Fourth Congress held in Helsinki, Finland this past spring. He is director of the St. Elizabeth's Hospital of Boston and an associate professor of medicine at Tufts University School of Medicine.

1969

Elliot Livstone resigned from the Yale medical faculty in June and has opened his office for practice of gastroenterology in Riverview Professional Center, Sarasota, Florida.

1971

H. Steven Moffie, who is associate professor of psychiatry at Baylor College of Medicine, was awarded a fellowship by the American Jewish Committee to attend the annual Academician's Seminars in Israel, December 20 to January 3, 1984. He was joined by his wife Rusti, who is a learning disabilities specialist. The trip included 23 American academicians and one other physician. Dr. Moffie's particular area of research is in ethnic identity. After returning, he wrote two short pieces for the journal devoted to the seminar: "Singing for the Scholars: The Yiskor Service at Yad Vashem" and "From the Ivory Tower to the Dead Sea: The Genesis of a Seminar."

1972

In response to Yale Medicine's request in our last issue for news about current activities of alumni, Roy Kaplan sent in the following: "I have been appointed chief, Division of Rheumatology at Mercy Hospital and Medical Center in San Diego; clinical assistant professor in the Department of Medicine at University of California at San Diego Medical Center. I have also been reappointed chairman of the Medical and Scientific Committee of the San Diego Chapter of Arthritis Foundation for 1984 and re-elected to the Board of Governors, San Diego Chapter, Arthritis Foundation."

1976

Jerome Zeldis is one of five who were recently awarded Pfizer postdoctoral fellowships in the first annual Pfizer Fellowship competition. Following his internship and residency training in internal medicine at UCLA Medical Center, Dr. Zeldis, since 1981, has been a research fellow in medicine at Harvard and also a clinical research fellow in medicine at Massachusetts General Hospital. His postdoctoral research will examine, through molecular biological and recombinant DNA technologies, the induction of chronic hepatitis by hepatitis B virus (HBV) and the association of HBV and HBV-related hepatitis with hepatocellular carcinoma.

1978

Arthur Gershkoff, who is a member of the attending staff of Magee Rehabilitation Hospital in Philadelphia and director of its Chronic Pain Program, has been elected president of Magee's medical staff. In addition to his position at Magee, which is a regional lifetime resource center dedicated to improving the quality of life for the physically disabled, Dr. Gershkoff is an instructor and a consulting staff physician at Thomas Jefferson University's Department of Rehabilitation Medicine. He has been the author and co-author of numerous presentations in the areas of pain, the chronically ill and spinal cord injury.

Michael Owens has joined the Watts Health Foundation, Inc. as medical director of the Watts Health Center in Los Angeles.

1980

Jay Baraban is one of five winners of the Pfizer postdoctoral fellowships in the first annual Pfizer Fellowship competition. After interning at Hospital of St. Raphael in New Haven, he completed his psychiatric residency training at Columbia College of Physicians and Surgeons and the New York State Psychiatric Institute. Since July of last year, Dr. Baraban has spent the elective period of his psychiatry residency in the laboratory of Dr. Solomon Snyder at Johns Hopkins and will conduct his postdoctoral research under Dr. Snyder. Pursuing his interests in novel mechanisms whereby chemotherapies may relieve schizophrenic symptoms, he will study the allosteric modulation of dopamine receptors and its implications for the development of improved antipsychotic chemotherapies.

1982

Lynn Tanoue, serving her residency in medicine at Yale-New Haven Hospital, has been selected as the recipient of The Samuel D. Kushlan Award, which was inaugurated in 1969 and which is given annually to the junior assistant resident who has contributed the most to patient care during rotations through the Community Medical Service.

1983

Eric Winer, a member of the house staff at Yale-New Haven Hospital in the Department of Medicine, has been selected as the recipient of The Samuel
D. Kushlan Award, annually given to the intern who has contributed the most to patient care during rotation through the community Medical Service.

**HOUSE STAFF**

1946

John McGovern received an honorary degree from Florida State University at its commencement in April. Dr. McGovern was also the main speaker for the University’s commencement program. In May he delivered the principal address and was awarded an honorary Doctorate of Laws degree at the spring commencement of Lamar University in Beaumont, Texas.

1967

Thomas Hansen has announced the opening of his office at 2 Church Street South in New Haven for the practice of dermatology.

1971

Thomas Koontz has been elected chairman, Board of Trustees of the Medical Park Hospital in Winston-Salem, North Carolina.

1972

Edward McGuire has left Yale as professor of urology to become chairman of the Department of Urology at University of Michigan Medical School.

1982

Warren Fagadau has been named by the Pan-American Association of Ophthalmology to become the coordinator between North American and Latin American activities. In addition to his ideas for increasing membership, participation and service in the PAAO, his primary goal is to increase the exchange of fellowships between the Americas. Dr. Fagadau is in practice in Dallas.

**PUBLIC HEALTH**

1969

Samuel Korper has been appointed director of the National Institutes of Health Division of Legislative Analysis. In his new position, Dr. Korper will be responsible for advising the NIH director and other senior NIH executive staff on legislative developments relevant to NIH programs and activities, the need for proposed changes in the statutory base of NIH activities and development of new legislative proposals. Previously, Dr. Korper served as associate director for Legislation, Epidemiology, and the Environment in the Office of the Deputy Assistant Secretary for Health Research, Statistics, and Technology, OASH.

1980

Robert Levine has been appointed assistant administrator, University Hospital at New York University Medical Center. He was formerly director of the Faculty Practice Plan at Long Island Jewish-Hillside Medical Center.

**IN MEMORIAM**

Max H. Ruby
July 16, 1983
ex med'21

Arthur G. Boggs
January 20, 1984
HS'21

Mariano Riccitelli
July 1, 1984
M.D.'22

Alexander E. Rosenberg
September 28, 1983
M.D.'26

John Burke
March 2, 1984
M.D.'28

Tony Liebman Rakieten
April 22, 1984
M.D.'29

George P. Jackson
June 30, 1984
ex med'30

Roland T. Wehger
June 1984
M.D.'32

Daniel F. Harvey
June 29, 1984
M.D.'33

Joseph Mignone
July 5, 1984
M.D.'33

William R. Newman
November 7, 1983
ex med'36

John A. Dillon
August 28, 1983
M.D.'38

John Prutting
March 16, 1984
M.D.'38

Henry W. Ryder, M.D.
March 13, 1984
ex med'38

Henry Merriman
July 17, 1984
HS '42

Paul T. Bruyere, M.D.
October 1971
M.P.H.'43

Egberto P. de Assis, M.D.
date unknown
M.P.H.'43

Karel Van Syckel Toll
November 19, 1983
HS'46

Stanley Harvey Schneider
February 28, 1984
HS'54

Nicholas P. Kiritinos
January 1, 1984
HS'59

Peter W. Ralph
October 1983
M.P.H.'62

Millard Amdur
March 15, 1984
M.D.'64
CLASS OF 1984
postgraduate appointments

ALABAMA
University of Alabama Medical Center, Birmingham
John Gwin, Jr., General Surgery

ARIZONA
Tucson Hospitals, Tucson
David Fillmore, Transitional

CALIFORNIA
Cedars-Sinai Medical Center, Los Angeles
Steven Schick, Pathology
Pacific Medical Center, San Francisco
Charles Zacks, Ophthalmology
UCLA Hospital and Clinics
Abner Korn, Obstetrics and Gynecology
University of California San Diego Affiliated Hospitals
Robert Bookstein, Pathology
Robert Winchell, General Surgery
University of California Hospitals, San Francisco
William Cimino, Orthopedic Surgery
Linda Grais, Internal Medicine

COLORADO
University of Colorado Affiliated Hospitals, Denver
John Babich, Internal Medicine
Terri Richardson, Internal Medicine

CONNECTICUT
Middlesex Memorial Hospital, Middletown
Roger Phillips, Family Practice
Waterbury Hospital
Paul Gagliardi, Medicine

Yale-New Haven Medical Center
David Astrachan, Surgery
Leonard Bell, Internal Medicine
Mary Bogucki, Internal Medicine
Michael Brines, Internal Medicine
Sandra Castro, Pediatrics
Terence Chen, Neurosurgery
Arthur Duberg, Diagnostic Radiology
Edward Duda, Internal Medicine
Mariano Garcia Blanco, Postdoctoral Fellow, Molecular Biophysics and Biochemistry
Bruce Hafity, Therapeutic Radiology
Robert Havlik, General Surgery
Ellen Heyneman, Pediatrics
Sabra Jones, Orthopedic Surgery
Jeffrey Katz, Internal Medicine
Daniel Kolansky, Internal Medicine
John Krystal, Psychiatry
James Linakis, Pediatrics
Dan Oren, Psychiatry
Ronnie Rosenberg, Psychiatry
Ana Salazar, General Surgery
Stephen Sigal, Internal Medicine
Paul Snyder, Surgery
Kenichi Takeshita, Internal Medicine
Diana Traquina, Surgery

DISTRICT OF COLUMBIA
Georgetown University Hospital
Conrad Duncan, Obstetrics and Gynecology
George Washington University Hospital
Jill Ratain, Internal Medicine

FLORIDA
University of Florida Medical Center, Shands Hospital, Gainesville
William Rios, Internal Medicine

ILLINOIS
University of Chicago Clinics
Jessica Berman, Surgery
Steven Gore, Internal Medicine
Carolyn Johnston, Obstetrics and Gynecology

MAINE
Eastern Maine Medical Center, Bangor
Connie Kreis, Family Practice

MARYLAND
University of Maryland Hospital, Baltimore
Deborah Arrindell, Pediatrics

MASSACHUSETTS
Beth Israel Hospital, Boston
Paula Fraccaso, Internal Medicine
Dominic Pennachio, Jr., Internal Medicine
Janet Rucker, Internal Medicine
Robert Staszewski, Internal Medicine
Boston City Hospital
Douglas Webber, Internal Medicine
Boston University Affiliated Hospitals
Geoffrey Ahern, Neurology
Brigham and Women's Hospital, Boston
Scott Haig, General Surgery
Donald Inger, Research Fellow, Pathology
Susan Friedewell, Obstetrics and Gynecology
Children's Hospital Medical Center, Boston
Donald Inger, Research Fellow, Surgery
Massachusetts General Hospital, Boston
Samuel Bern, General Surgery
Troyen Brennan, Internal Medicine
Juanita Merchant, Internal Medicine
Massachusetts Institute of Technology, Cambridge
Martin Yarmush, Research Associate, Chemical Engineering

MICHIGAN
University of Michigan Affiliated Hospitals, Ann Arbor
John Lane, Orthopedic Surgery

MINNESOTA
Mayo Graduate School of Medicine, Rochester
Robert Arnold, Ophthalmology
University of Minnesota Hospitals, Minneapolis
Kenneth Rosenblum, General Surgery

NEW YORK
Bronx Municipal Hospital Center
Robert Berkowitz, Medicine
Saul Sadka, Diagnostic Radiology
Maimonides Medical Center, New York
Leon Eiskowitz, Internal Medicine
Montefiore Hospital Center, New York
Nelson Aaron, Pediatrics
Mae Stein, Surgery
Mount Sinai Hospital, New York
Emilio Juncosa, Obstetrics and Gynecology

New York Hospitals, New York
David Young, Pathology

New York Hospital, Cornell-Westchester Division, White Plains
Kim Gutner, Psychiatry
Mark Servis, Psychiatry

New York Infirmary, Beekman Downtown Hospital, New York
Theodore Silver, Medicine

New York University Medical Center, New York
Alison Lindsay, Pediatrics
Steven Sockin, Internal Medicine

Presbyterian Hospital, New York
Martha Arden, Pediatrics
Maxwell Bloche, Internal Medicine
Michel Kiou, Surgery
Paul Rothman, Internal Medicine

Rockefeller University, New York
Kenneth Mackie, Research Fellow, Laboratory of Cellular and Molecular Neuroscience
Roosevelt Hospital, New York
Andrew Sternlicht, General Surgery

State University, Kings County Hospital, Brooklyn
Frederick Paola, Internal Medicine

NORTH CAROLINA
Duke University Medical Center, Durham
Jerome Kim, Internal Medicine
Richard Left, Internal Medicine
North Carolina Memorial Hospital, Chapel Hill
Peter Arvan, Internal Medicine

OHIO
Case Western Reserve University Hospital, Cleveland
Philip Krause, Internal Medicine
Edwina Simmons, Obstetrics and Gynecology
Valerie Stone, Obstetrics and Gynecology

Cincinnati General Hospital
David Binder, Emergency Medicine

Pennsylvania
Albert Einstein Medical Center, Philadelphia
Sharan Abdul-Rahman, Obstetrics and Gynecology

Graduate Hospital, Philadelphia
Kieran Cooper, Internal Medicine

Hospital of the University of Pennsylvania, Philadelphia
Margaret Lancefield, Internal Medicine
William Palmer, Internal Medicine
Aron Wahrman, General Surgery
Sharon Youcha, Obstetrics and Gynecology

Lankenau Hospital, Philadelphia
Helen Mrose, Medicine

St. Christopher's Hospital, Philadelphia
Richard Rossin, Pediatrics

Temple University Hospitals, Philadelphia
Charles Abrams, Internal Medicine
Jay Kostman, Internal Medicine
Steven Porcelli, Internal Medicine

Thomas Jefferson University Hospital, Philadelphia
Joseph DeSantis, General Surgery

RHODE ISLAND
Miriam Hospital, Providence
Cynthia Berry, Medicine

TEXAS
University of Texas Southwestern Affiliated Hospitals, Dallas
Edward Dohring, Surgery

WASHINGTON
University of Washington Affiliated Hospitals, Seattle
Joseph Chambers, Internal Medicine
Barbara Coda, Anesthesiology
Lori Rubens, Psychiatry
The State of Our School

Continuing the Search for Solutions to Inherited Diseases and Disorders

New Knowledge Takes the Guesswork Out of High Risk Pregnancies

A Very Special Place to be Born

Here & About

Alumni News

1983-1984 Alumni Fund Report

ABOUT THE COVER:
The design was adapted from a Chinese hamster, human hybrid clone panel for assignment of human DNA sequences to human chromosomes (shown above) developed in the laboratory of Dr. Uta Francke, associate professor of human genetics and pediatrics. The human chromosomes present in each of the 17 different Chinese hamster, human hybrid cell lines are indicated by black boxes. White boxes refer to human chromosomes that were not detected. The chromosomes indicated by hatched boxes were rearranged and only present in part. The crosses symbolize low frequency of chromosome.

DNA from these hybrids was tested with cloned human DNA sequences that recognize restriction length polymorphic loci. Dark boxes on the right indicate presence of hybridizing sequences, a cross means weak hybridization and white boxes mean lack of hybridization. Based on concordant segregation in these hybrids the locus, thereafter called D14S1, was mapped to a region of chromosome 14, and the locus called DXYS1 was mapped to the Y chromosome and to part of the X chromosome.

Dr. Francke is a leader in the field of somatic cell genetics, recognized internationally for her elegant work in mapping human and mouse genes to specific chromosomal regions. Recently, she has pioneered in the study of chromosome abnormalities of human tumors and in the mapping of oncogenes.

More about outstanding research in the Department of Human Genetics appears in an article beginning on page 6 of this issue.
On September 9th, Dean Leon E. Rosenberg convened the faculty in Mary S. Harkness Auditorium to deliver his first formal presentation to them on the “State of Our School”. The audience which filled the auditorium to capacity included two of his predecessors, Dr. Vernon W. Lippard, dean from 1952 to 1967, and Dr. Robert W. Berliner, who retired in June after serving eleven years as dean. The text of Dean Rosenberg’s address and accompanying illustrations are printed in full on the following pages.

Ladies and Gentlemen of the Faculty of the School of Medicine:

I am pleased to stand before you as your new dean. Not being superstitious, my pleasure is not lessened by assuming this post in “Orwell’s year” or by addressing you on the thirteenth of September, or by being the thirteenth dean of this institution. If anything should have daunted me about where I find myself today, it would have been the written and oral messages I received during the months after my appointment was announced. Of the nearly 300 letters I received (a volume which reminded me somewhat anxiously, of the national visibility of this deanship), more than 30 added words of concern, condolences, even grief to their congratulations. Several letters contained whole pages of jokes reveling in the foolishness of deans. A good friend said that the last good dean was Gunga Din because “at least he brought water to the troops.” Yet another advised me “not to let the bastards get me down,” but failed to tell me who the bastards were. Finally, so many of you asked me if I was really certain I wanted to be dean that I came to understand that many perceive this job as one to be taken on only by someone confused, intoxicated, or otherwise impaired.

Why then do I stand here? My reasons are many: first, because I desire a new career challenge (and have a queasy feeling these days that I’ve found one); second, because I wish to learn more about Yale University, a place which has earned my enduring loyalty by understanding what phrases like “the academy,” or “academic freedom,” or “collegiality,” truly mean; third, because I have great admiration and respect for Bart Giamatti and Bill Brainard and believe they and their administration are committed to the good fortunes of their medical school; fourth, and foremost, because I consider it an enormous honor and privilege to be your leader — to be the dean of and for this distinguished faculty.

I wonder, in fact, how many of you know that you are a member of a truly outstanding faculty, and that this school’s faculty has been distinguished for more than half a century. Whereas I abhor stiff-necked boasting or hubris, by individual or institution, I have long felt that this faculty has honed the virtues of modesty and self-effacement to the point that they approach being vices. We have been so “low key” that our achievements have sometimes been invisible to ourselves and to the public.

How many of you know that:

- penicillin was first administered to a patient in this country by a Yale physician at the Yale-New Haven Hospital in 1942
- that another Yale physician brought chemistry and biochemistry to the bedside in the 1940’s
- that the first highly purified preparations of ACTH were prepared here in 1943
- that cancer chemotherapy began here in the 1940’s with the introduction of nitrogen mustard for the treatment of Hodgkin’s disease
- that a Yale biochemist first elucidated the mechanism of action of pepsin
To those of you who say these things took place before your time, I ask how many of you are familiar with some of the more recent major achievements of this faculty:

- the development of methods for the mapping of human genes to specific chromosomes
- the discovery of suppressor T cells
- the first demonstration of the role of cyclic nucleotides in neurotransmitter action
- the initial description of Lyme disease, followed by elucidation of its spirochetal etiology and definition of effective antimicrobial treatment
- the discovery of biotinated nucleotides as multi-purpose gene probes
- the development of one of the premier fetal medicine/prenatal diagnosis programs in the world
- the discovery that beta-blocking drugs are effective in the treatment of glaucoma

This faculty has been recognized nationally and internationally for its research achievements. It currently contains one Nobel Laureate, 17 members of the National Academy of Sciences, 11 members of the American Academy of Arts and Sciences and nine members of the National Institute of Medicine. Its departmental programs in Physiology, Pharmacology, Cell and Molecular Biology, and Biochemistry, each ranked among the top four in a recent survey of graduate departments. This is all part of our institutional heritage. We have a right to recall it in the hope that it will elevate our sights when we aim too low, and lessen our pain when we suffer institutional wounds.

But being more comfortable with data presentation than with exhortation, let me tell you who make up this faculty and a bit about what we do. As can be seen from the bottom line on figure 1, this faculty currently numbers 2,112; two-thirds are part-time and voluntary; and one-third full time. Of this full-time faculty, roughly one-third have tenure or its equivalent. This faculty has nearly doubled since 1972-73. Most of this growth has occurred in the voluntary faculty, reflecting expansion of our affiliation program with community hospitals. The full-time faculty has increased by only about 18 percent since 1972 — this increase reflecting a gain in tenured academic faculty and in senior research faculty. Term faculty members have decreased slightly. These numbers suggest that our full-time faculty is a bit “greyer” in 1984 than it was a decade ago, but not dangerously so. I am concerned, however, by the relatively slight increase in the number of women on our full-time faculty. In 1972-73 women accounted for 11 percent of the total full-time faculty. By 1983-84, this number has risen to only 17 percent. Clearly, the “gender gap” is closing here, but we still have some distance to go. The situation regarding Black faculty members is quite discouraging; there has been essentially no growth since 1972 despite recruitment efforts.

This large and diverse faculty does many things, but I'll address only the traditional trio of activities — teaching, research and patient care — in that order.

As can be seen in figure 2, we teach a diverse array of students, eight categories to be precise. In 1983-84, M.D. candidates, who numbered 417, accounted for only about one-quarter of the 1726 total students at this school, with about equal fractions coming from house officers and postdoctoral fellows. Over the past decade, as noted on the bottom line, total students here have increased by about 350 or by 25 percent. Nearly half of this increase has come in the postdoctoral fellow category, and another third among house officers and Ph.D. candidates. These figures serve as a reminder that many of us teach on a one-to-one basis in the laboratory or at the bedside, rather than in the more traditional classroom setting. In contrast, little growth has occurred among M.D. or M.D./Ph.D. students. If, as some have said, the combined M.D./Ph.D. degree program represents the best hope of attracting M.D.’s to research careers, perhaps we should address ways of increasing their representation in our student body.

None of us can afford to forget that teaching is a fundamental raison d’etre of this institution and that our students are our legacy. They are tomorrow's medical scientists and clinicians. To them we entrust the proceeds of the research and clinical experience which we accumulate over a lifetime’s work. Having said that, I have no precise way of knowing how well we do collectively as teachers or how much time we spend at it. Data of that sort are almost impossible to assemble. Some of you are gifted educators, capable of inspiring your students. Some others of you, sadly, give little to and get little from this endeavor. Most of us fall in the middle; we take our teaching responsibilities seriously and derive considerable reward therefrom. I am grateful to all of you who teach, and salute particularly the voluntary faculty who make such major contributions to the clinical teaching programs at Yale-New Haven Hospital and at the other hospitals with which we affiliate.

The other raison d’etre for this school is to conduct research — fundamental and applied — of the highest quality. Earlier I mentioned some of the historical highlights of this faculty's research contributions and alluded to a few of the accolades received for such contributions. Let me emphasize now that the scientific
contributions of this faculty do not derive from stellar contributions of a few "stars" — though stars we have. It is the collective effort I want to underscore.

On the graph in figure 3 is plotted the research grant and contract income (in millions of dollars of direct costs) generated by this school’s faculty annually since fiscal year 1973. Federal research and training grants, more than 90 percent of which are from the NIH, are shown in lines; non-federal grants are shown in dots. In 1973, our total income from these sources was 26 million dollars, 21 million of which came from federal sources. Over the ensuing decade, this income more than doubled, reaching a total of 57 million in 1984. During this interval, federal and non-federal funds increased comparably — the fractional contribution from federal sources being 80 percent in 1973 and 79 percent in 1984. This increased income is made more impressive by recognizing that it has occurred during an interval marked by a leveling off of the NIH budget and by more competition from the increasing number of applicants at a much larger number of medical schools. In 1973, this school ranked tenth nationally among medical schools as a recipient of total NIH research grants. In 1976, it was seventh, in 1980 third, and in each of the past two years, second. In 1973, our fractional share of NIH’s total grant awards to medical schools was 2.8 percent; by 1984 that had risen to 3.4 percent. In the research training grant category, perhaps the most keenly competitive area of NIH funding, we have done even better — ranking first nationally in each of the past four years. This impressive performance is not confined to any one part of the School. In 1984, 339 of the 666 eligible full-time faculty (that is 51 percent of the total) were principle investigators on one or more externally funded grants; 157 of these PI’s came from the basic science departments where virtually all faculty were PI’s. The remaining 210 PI’s came from the clinical departments.

Before leaving these encouraging data, let me show you one other piece. In figure 4, the direct cost income from research grants (dots on the graphs) is shown corrected for inflation (lines). In constant 1972 dollars, this school’s research grant income increased by 4.5 million dollars or 27 percent over the interval shown. The number of individual PI’s increased too — from 225 in 1973 to 339 in 1984. Such real financial growth did not occur at most medical schools during this interval. It bears strong witness to the vitality of our research capability.

The great strength shown by this school’s research enterprise is matched by its clinical fortunes, which have prospered and broadened in recent years. The major hospital in which our part-time and full-time faculty practice, Yale-New Haven Hospital, is an institution regularly ranked among the top hospitals in the country. This hospital, our hospital, is now housed in an excellent new facility, and is led by a superb administrative team headed by Tom Smith. The mutually pivotal relationship between Yale-New Haven Hospital and the Yale School of Medicine cannot be overstated. Strengthening this powerful, (if sometimes frustrating and always complex) symbiotic partnership will be a central issue of my deanship.

Some of you may not be aware of the array of other health care institutions with which this medical school affiliates (figure 5). We have major relationships with such local institutions as the West Haven Veteran’s Administration Medical Center, and the Connecticut Mental Health Center. We have important affiliation agreements with no fewer than ten community hospitals in Connecticut and with an array of health maintenance organizations in our locale, including the Yale Health Plan, the Community Health Care Program, and the Hill Health Center. All of these are vital to the teaching mission of this school. In turn, our presence at these institutions enhances the quality of care provided there.

Previously, I used some financial data to describe our faculty’s research program, recognizing, of course, that evaluating our research by counting dollars is as spurious as appraising a football team by seeing how much its players weigh. Nonetheless, I think we learn something from such measuring, and I’ve done a bit more of it concerning our full-time faculty’s clinical activity. In figure 6, I’ve plotted total income earned from medical services (i.e. patient billings and laboratory charges) in millions of dollars as an annual function. Between 1973 and 1984, this income has increased in actual dollars...
HOSPITALS AFFILIATED WITH THE YALE SCHOOL OF MEDICINE

Yale-New Haven Hospital
Veterans Administration Hospital
Connecticut Mental Health Center
Bridgeport Hospital
Danbury Hospital
Greenwich Hospital
Griffin Hospital
Hospital of St. Raphael
Lawrence and Memorial Hospitals
Norwalk Hospital
St. Mary's Hospital
St. Vincent's Medical Center
Waterbury Hospital

Total Medical Service Income by Full-Time Faculty
Yale School of Medicine FY1973 to FY1984
Actual and Constant Dollars

from 6.8 million to 46.4 million (shown in dots), a nearly six-fold rise. When corrected for inflation, considerable real growth is seen as shown in lines on the graph. In constant dollars, however, the increase since 1973 is only three-fold. When examined critically, this apparently remarkable growth has many explanations. First, it reflects a completely overhauled and more efficient billing and collection program of the School's Office of Professional Services. Second, nearly 40 percent of the growth reflects billings by several hospital-based departments (Anesthesiology, Diagnostic Radiology, Therapeutic Radiology) which formerly billed their services through Yale-New Haven Hospital. Third, it reflects the introduction of a number of new tertiary care services by the full-time faculty. Fourth, it reflects a modest increase in the number of full-time faculty engaged in some medical service activity. It is particularly worth noting that the 300 percent increase in real medical service income between 1973 and 1984 was achieved with no increase in inpatients admitted to Yale-New Haven Hospital by full-time faculty and with only a 48 percent increase in outpatients seen by this practicing group.

In 1973, only 15 percent of the School's total income was derived from medical services and no less than 67 percent from grants and contracts — a ratio which mortgaged our future far too much to the federal economy and political whim. In 1984, medical service income accounted for 31 percent of the total, and grants and contracts for 51 percent. Together, these two sources continue to account for 82 percent of the school's income. This testimony to your collective, entrepreneurial efforts, I should add, is not unlike that found in many other prominent, research-intensive, private medical schools with large faculty-to-student ratios.

Institutions like this one remember their past and assess their present to prepare for the future. We of the faculty and administration of the Yale School of Medicine have every reason to face the future with excitement and confidence. None of us can doubt the opportunities afforded by the exuberant, sometimes breathtaking, pace of advances in cell and molecular biology, genetics, immunology, and neuroscience — both for an enhanced understanding of human biology and for new insights into the pathogenesis, diagnosis, treatment, or prevention of disease. None of us should doubt either the commitment or the capacity of this school to remain at the very top of this country's medical institutions. My restless spirit has caused me, from time to time, to look hard at some other fine medical schools — to the northeast of us, and just to the south; slightly to the west of us, and far to the west. None, in my view, is as vital, as sound, or as vibrant as the school is. But if you join me in aspiring to be vibrant as well as vital, and to soar as well as be sound, then we must strive ever harder for excellence and be prepared for change. It is this challenge of change which I see as the major agenda item of my deanship, and it will take many forms.

First, we must find new leadership for many of our academic units. As of July 1, we have new chairmen in MB and B (Bill Konigsberg) and in Human Genetics (Carolyn Slayman), and I am negotiating actively with a candidate for the chair of Pharmacology. Search committees have recently been appointed to identify replacements for chairmen in Dermatology, Psychiatry, and Surgery and next year, a new chairman in Neurology will be sought. Administration leadership, too, is changing. Sue Dorn has recently been appointed Director of an expanded Medical School Development Office, Bella Berson has been named director of our much used and much needed medical library, and we are seeking a head for a revamped and enlarged public information office.

Second, we must strengthen (and in some cases) establish programs in critical or particularly exciting areas in which we have unusual potential or in which we are under-represented — molecular immunology; neuroendocrinology; cancer biology with particular reference to the structure and function of oncogenes; clinical pharmacology; and the biomedical applications of computers and of nuclear magnetic resonance spectroscopy — to mention a few.

Third, we must appraise and, where necessary, modify our curriculum for medical students particularly, but for our many other student constituencies as well. We should not accept a medical school basic science curriculum which is either too dense or too ossified. Course hours should reflect where medicine is going, not merely where it has been. I see a core curriculum as essential, but that core needn't be rigidly assigned to departments nor should it deny the opportunity for electives. I believe our students should, as part of their educational core, be exposed to information concerning the place of medicine in our society via such topics as: biomedical ethics; medico-legal issues; and the economics of health care — from the vantage of provider as well as patient. If three semesters is not sufficient time to do this part of our teaching well, then let us consider going back to four. That would result in compression of the clinical curriculum. But if, as many argue, the fourth year is being wasted because students devote too much time to finding a house staff position or to proving themselves as interns, such compression may not be a bad idea. Our country is filled with voices urging modification of and experimentation with medical education. We are too visible and too able a school to act as the control group.

Fourth, we must add to and modify the physical facilities in which we carry out our functions. In this regard, change will be particularly dramatic: renovation of space in the Boardman Building for a
much expanded Yale Eye Center; erection of a new Faculty Practice Plan building on the corner of Howard and Davenport Avenues to permit our clinical faculty to see outpatients in an appropriate setting; construction of a Magnetic Resonance Center below the LC1 building to permit expansion of programs in metabolic research, diagnostic imaging, and macromolecular characterization; renovation of space in the Tompkins stack for our newly established Section of Molecular Neurobiology. The latter project is nearing completion; the other three are scheduled to begin within the next few months. Other construction plans are only a bit further into the future. The Yale Psychiatric Institute will bring its widely recognized facility for inpatient management of patients with severe emotional disturbances back to the medical center. The medical library will be enlarged and modified to become a vanguard facility of its kind. Finally, and crucially, we need to construct a new laboratory research building on our campus — probably where the tennis court now stands — to provide an opportunity for much needed growth in our outstanding laboratory research enterprise whose facilities have expanded little in the past decade.

These changes, and many others unmentioned or even unimagined, will require time, energy, and resources. Please do not equate the word "resources" with money. The most important resource we have to accomplish what is needed is you — the human resource that is this faculty. You have always been responsive — sometimes even heroic — in your contributions to this school. All of you — full or part time, paid or voluntary, M.D. or Ph.D., clinician or basic scientist — must be prepared to continue, even to increase, those contributions — not just to your own research programs, or your teaching commitments, or your patient care activities, or your sections, or your departments, but to the institution as a whole.

The other critical resource needed to move ahead boldly is monetary. For two years, a development advisory committee composed of senior faculty and appointed by Dean Berliner, examined the Medical School's resources with a particular eye to the future. It concluded that the continued greatness of this institution depends on a major infusion of funds. That conclusion was accepted by President Giamatti and the Yale Corporation with its many-toned, multi-voiced sections of bedside clinicians and bench researchers, of surgeons and physicians, of clerks and technicians, of students and alumni, of deans and managers — I know what I'll be listening for. It is a sound rich and mellow enough for all to appreciate, yet unique enough for even the most discerning ear to recognize. Achieving that sound will not only be gratifying for us, it will enrich all mankind.

"... if you join me in aspiring to be vibrant as well as vital, and to soar as well as be sound, then we must strive ever harder for excellence and be prepared for change. It is this challenge of change which I see as the major agenda item of my deanship, and it will take many forms."
CONTINUING THE SEARCH FOR SOLUTIONS TO INHERITED DISEASES AND DISORDERS

Under the direction of Dr. Leon E. Rosenberg, who was chairman since its founding in 1972 until his appointment as Dean in July, the Department of Human Genetics has assumed a leadership role in the application of basic genetic knowledge to the problems of human illness. With Dr. Carolyn Slayman as chairman, the Department continues to focus on the identification and explanation of the basic biochemical and genetic mechanisms responsible for specific diseases, as well as on the study of new methods of disease detection and treatment of patients.

by Nissa Simon

More than 1,600 different human disorders are caused by abnormalities — coding errors — that occur in any one of tens of thousands of genes, each of which carries the genetic blueprint for a single protein. These seemingly minor departures from the normal chemistry of the gene result in mental retardation, physical deformity, metabolic disorders and a host of other inherited disorders, some insignificant, others disastrous.

In recent years, scientists have learned to diagnose some of these problems before birth and to read the genetic code in an effort to avoid the tragic consequences of these diseases. Members of Yale's Human Genetics Department are among those scientists working to assure that eventually as many infants as possible will be born free of the burden of genetic diseases. Four of these scientists approach the problem from different levels. Dr. Roy W. Breg, Jr., professor of human genetics and pediatrics, and director of the diagnostic cytogenetic laboratory, is studying genetic diseases at the level of chromosomes. Dr. Kenneth K. Kidd, associate professor of human genetics and psychiatry, is involved in the relatively new science of human gene mapping. Dr. Maurice J. Mahoney, professor of human genetics, pediatrics and obstetrics and gynecology, is working on ways of identifying genetic problems during fetal life. Dr. Margretta R. Seashore, associate professor of human genetics and pediatrics, and director of the genetic consultation service, is attempting to quantify the risk of genetic illness even before conception.

In the late 1960's, Dr. Breg and a colleague were the first to demonstrate that cells from amniotic fluid could be cultured and used to diagnose genetic problems prenatally. By the mid-1970's, amniocentesis was a routine procedure. It remains a major tool for diagnosing genetic defects.

Dr. Breg now studies chromosomes associated with a variety of health problems. "One of the largest groups we work with consists of couples where the woman has had multiple spontaneous abortions and couples where the woman gave birth to an infant with a birth defect or congenital malformation.

"When I speak of birth defects or malformations, I include a spectrum of abnormalities such as mental retardation, multiple physical abnormalities and problems of incomplete sex differentiation. Not all of these have a chromosomal basis, but many do," said Dr. Breg. His laboratory is also developing techniques to pinpoint chromosomal imbalances that cause multiple abortions, which will permit more accurate counseling.

Chromosomes must be studied using cells that are alive and dividing because only during mitosis do they contract so that they can be stained and photographed. One of the recent advances in cytogenetics allows the study of cells during earlier stages of mitosis.

"Before 1970, we could identify chromosomes only by their length and by the position of the centromere. In many cases, we couldn't distinguish between chromosomes within a certain group that were similar in length and the position of their centromere. When new banding techniques came along, we could begin to see the patterns that are specific for each type of chromosome. This improved our method of detecting various abnormalities. But we knew at the time that we were still not seeing some deletions and translocations.

"We realized that we would be able to see more if the chromosomes were longer, before they contracted for division. But these long chromosomes are difficult to work with because there are so many overlaps and bends. Gradually, we've been learning to work with longer and longer chromosomes," said Dr. Breg. "The trick is to get them to spread enough so they're reasonably separate, which makes them easier to work with. But there's a limit, because if you spread them too much, the cell breaks and loses chromosomes. If they're not spread enough, you can't distinguish them. So we try to strike a balance.
Dr. Breg

"I wish the chromosomes were as neatly lined up in the cells as they are after we stain them, photograph them, cut them out of the photograph individually and then line them up for their portrait. In a textbook they look very tidy, but in actuality, they look more like a bowl of spaghetti," continued Dr. Breg.

As its name implies, the diagnostic cytogenetics laboratory is primarily responsible for providing clinical services. Because the work is so painstaking, not many other laboratories offer this technique as a diagnostic service.

Dr. Breg foresees some kind of computer-assisted analysis to help locate which cells are dividing. "We also hope to get help from a computer-based image analysis system to analyze the 800 to 1,000 different bands per set of chromosomes," he said. "There are so many genes in chromosomes that no one knows how many there are altogether, but even the smallest chromosome surely must have more than 100 genes."

The problem of identifying these individual genes is the task of gene mapping, the specialty of Dr. Kidd. DNA molecules form a continuous strand in each chromosome and the only way to distinguish a gene from a 'spacer' DNA between genes is by identifying the information content.

"It's like taking the 26 letters of the English language, some spaces, a few commas, some semicolons, colons and periods and putting them all into a random string. Insert a sonnet by Shake-
By 1978, perhaps 100 had been discovered, but only about 20 of them were common enough to be good markers. Most of the others happened so infrequently that although they were polymorphisms, they weren't useful. In 1978, the first of the DNA polymorphisms was discovered. By 1979, there were three that were known, mostly near the hemoglobin region. By 1981, we knew about 26 of them. Last summer, 156 had been tabulated. No one has done a tabulation in the last year, but its probably close to 500 by now. The number is tripling each year.

All of these variants are inherited and it may be that as many as one out of every 100 base pairs in spacer DNA shows such a variation. That's on the order of 3 X 10^7 potential markers. "They're everywhere, all over the chromosomes," continued Dr. Kidd. "Anywhere anyone has looked, they've found polymorphisms. It's a whole new ball game."

Mapping the human genome is important because it is a necessary first step. "It will enable us to learn a phenomenal amount about human biology, what makes us what we are and how we function. We'll learn about human behavioral disorders and psychiatric disorders. There are more genes active and devoted to the function of the brain than to any other part of the body. There may be 30,000 to 50,000 different genes required only for the functioning of the brain. These are genes that aren't used in the fingernails or kidney or heart or muscles or bone. They are genes devoted only to the brain, genetically the most complex part of the human body. So genes offer an exciting approach to finding out how the brain functions and how it goes awry," concluded Dr. Kidd.

Research at the level of genes and chromosomes done in laboratories like Dr. Breg's and Dr. Kidd's provides the kind of information used in clinical settings such as Drs. Mahoney and Seashore.

"I'm involved in diagnosing disease during fetal life," said Dr. Mahoney. "Asking questions about an unborn baby's health has become such a common elective procedure for pregnant women that we have to screen large groups of women to narrow the group to a manageable one. Then we apply more invasive or more expensive diagnostic techniques where necessary."

These techniques include amniocentesis or chorionic villus biopsy, a new technique for obtaining fetal cells for prenatal diagnosis. Dr. Mahoney is principal investigator at Yale in a four-year collaborative clinical trial assessing the safety and accuracy of chorionic villus biopsy. Six other medical centers in the country are participating in the study funded by the National Institute of Child Health and Human Development (NICHD).

Unlike amniocentesis, which relies on culturing fetal cells found in the amniotic fluid, chorionic villus biopsy samples fetal tissue directly through the cervix. The procedure provides a larger tissue sample than amniocentesis, can be done much earlier in pregnancy and gives faster results.

Using a catheter and guided by ultrasound, the physician suction off a small plug of tissue from one or more villi, protrusions of the chorion. Where the villi grow and attach to the inner surface of the womb, the early chorion matures to form the placenta. Other villi grow into the membranous chorion, which lies outside the amnion as part of the fetal membranes. The tissue can be analyzed for defects immediately because it constitutes a dense sample of rapidly dividing cells.

Chorionic villus biopsy permits testing during the first three months of pregnancy and yields results within days, whereas amniocentesis is not routinely performed before the 15th week of gestation and doesn't yield results for another two weeks.

"To move prenatal diagnosis back from the middle of the second trimester to the eighth, ninth or tenth week of pregnancy has major benefits," said Dr. Mahoney. "One of the major drawbacks of amniocentesis is that of having to face a second-trimester abortion decision if serious fetal disease is discovered. The possibility of obtaining that same information earlier in pregnancy shifts the decision to a first-trimester abortion using suction aspiration.

"The dangers of chorionic villus biopsy and the risks to both the unborn baby and the woman still must be established. It's doubtful that the risks will be as low as those in amniocentesis. That will mean a significant decision. A pregnant woman will have to ask herself whether she wants an early diagnosis with a somewhat higher risk of miscarriage or a later diagnosis with a low chance of losing the baby. At the moment, the risk estimates of miscarriage are in the range of two to five percent. We expect it to drop, just as the risks for amniocentesis dropped. But most of us doubt that the risks will soon be as low as those for amniocentesis," Dr. Mahoney said.

 Whereas Dr. Mahoney is concerned with early diagnosis of genetic diseases, Dr. Seashore attempts to identify the prospects of a genetic disease even before conception.

"Most families come to see us because of a child who is mentally retarded or who has a birth defect," she said. "The family wants to know why it happened, will it happen again with another child, and what will happen with this child."

"We also have people come in who know that a family member suffers from what is believed to be a genetic condition and would like to know whether it runs in the family. They may tell us about a brother who has muscular dystrophy, or an uncle who has hemophilia, or a cousin who has epileptic seizures and they want to know if they..."
The first thing Dr. Seashore does is attempt to confirm the diagnosis. "There are many different kinds of genetic problems and if we don't know the exact problem, we're sunk. We have to corroborate the diagnosis ourselves, so it's important that we're diagnosticians as well as genetic counselors.

"That may sound distrustful, and I certainly don't mean to imply that we don't trust the rest of the medical community, but we've all seen cases that on first blush look like one thing and then turn out to be something different," Dr. Seashore explained. "In many cases scientific knowledge has progressed since the diagnosis was first made and there are now better tests and better ways of ascertaining just what kind of genetic problem it is.

"Achondroplasia, for instance, is one of a group of diseases that have to be distinguished from one another. Hurler's syndrome is now recognized to be one of at least ten different mucopolysaccharide storage diseases, some of which are inherited in a recessive way and one of which is inherited on the X chromosome. Each has a different biochemical defect, so it's important to distinguish them for purposes of prenatal diagnosis. There are many examples of that kind of similarity and the more we learn, the more there seem to be. In fact, it's almost become a rule that many things that look similar may be biochemically or genetically distinct," she said.

When patients come in to the clinic, the first person they see is the genetic counselor who also serves as clinic coordinator. She obtains the necessary medical records that tell what tests have been done. "We try not to do any more tests or x-rays than are absolutely necessary. It's costly, sometimes uncomfortable and perhaps, even risky for the patient," said Dr. Seashore.

During ensuing visits, the physician responsible for the diagnosis and care interprets the tests and explains the results. Once the family receives the needed information, they must then decide what to do. "They may decide this isn't the time to have a child and would like to think about it for a while. Then they may come back in a couple of years and ask whether anything has changed or whether there's any new information. Or, they may decide to go ahead with a pregnancy," said Dr. Seashore. "Then we arrange for prenatal diagnosis when that's possible and the family wants it."

Another part of Dr. Seashore's clinical service involves caring for children with inborn errors of metabolism. For instance, all infants in Connecticut are screened for PKU after birth. There are several different kinds of PKU, each of which requires a different treatment. One must be treated by dietary restrictions; one doesn't require treatment beyond the first few years of life, and yet another kind needs treatment with neurotransmitters and vitamin cofactors. "Within the first few weeks we can tell which kind of PKU it is," said Dr. Seashore, "and treat it accordingly."

Dr. Seashore's service is part of the Connecticut Genetic Services Program, a coordinated effort of Yale, the University of Connecticut and the State Health Department. The consultation clinics are not all located at Yale. The Yale School of Medicine is also responsible for the supervision of three genetic counseling clinics at community hospitals in Danbury, Norwalk and Bridgeport.

"Our center is also very active in the New England regional genetics group. Members from all over New England meet regularly to discuss new developments and coordinate services," said Dr. Seashore. "We can work together to try to help a family with members scattered throughout New England instead of having isolated groups trying to solve the problem separately."

Members of the Genetic Consultation Service have faculty appointments in the Department of Human Genetics. "We take our places as full members of the department in research and teaching," said Dr. Seashore. "All of us feel a scholarly commitment to the academic part of the department. It's exciting to work with basic scientists on a daily basis. And, having us around helps them see problems from a different perspective.

"Teaching is an important part of our job. I feel a strong commitment to teaching and to helping students whether or not they eventually specialize in genetics," she continued. "Although it doesn't always seem obvious to patients, we know that having people in training asking questions and seeking the latest information improves the level of care for patients."

What's ahead?

"We'll get better at diagnosis. We're now able to identify finer chromosome structures so that we'll improve our ability to locate genes, recognize them and identify mutations that we cannot now identify. We'll get better at telling people whether or not they carry a specific gene that puts them at risk," predicted Dr. Seashore.

"What's the next really big step? Manipulating a defective gene to make it work by fixing it or replacing it. We talk a lot about replacing the protein that's missing because the gene is malfunctioning. But it's clear that we have a great deal more to learn about how to do that and we cannot go forward at all without a lot of very careful basic research," Dr. Seashore concluded.

"This is an exciting time in the history of medicine," said Dr. Mahoney. "Knowledge of genetic disease is exploding. We at Yale have a diverse faculty that looks at many different aspects of human genetics and works together in a cooperative setting. The willingness to push forward and to be innovative have always been hallmarks of this department. We're now at a period where we can see the possibility of some exciting therapies for genetic diseases, and we have people working actively in those directions."
NEW KNOWLEDGE TAKES THE GUESSWORK OUT OF HIGH RISK PREGNANCIES

by Marje Noyes

Some of the most remarkable progress in medicine over the past ten years has been made in the relatively young field of perinatology. Disorders caused by chromosomal abnormalities, as well as an increasing number of genetically transmitted diseases and structural abnormalities can be detected prenatally, and perinatologists are beginning to be able to successfully treat some of these disorders in utero.

A number of advances in all aspects of this new field are due in large part to pioneering research by members of the Comprehensive Maternal Care Unit at Yale, which has been under the direction of Dr. John C. Hobbins, professor of obstetrics and gynecology and diagnostic radiology, since it was founded ten years ago. One of the leading fetal medicine/perinatal diagnosis programs in the world, the Unit's reputation is based on its contributions to the development of fetoscopy and other diagnostic procedures involving ultrasound, as well as for its superb care of mothers whose pregnancy is at risk. Their accomplishments are the result of truly close collaboration with researchers in human genetics, diagnostic radiology, obstetrics and gynecology, pediatric cardiology and surgery.

"Women come here literally from all over the world to find out if an illness or condition present in the family or a previous pregnancy will recur," said Inge Venus, pointing to a large map of the world marked with colored pins in countries as far away as South Africa, the Fiji Islands, India and Europe. A clinical studies researcher in the Department of Obstetrics and Gynecology, Ms. Venus has been a member of the Unit's staff since its beginning, and has witnessed the rapid advances in prenatal diagnosis which are giving parents options unheard of as little as ten years ago.

Twenty-seven in every thousand babies in the United States are born with some kind of defect, according to Dr. Hobbins. The Unit has the capability to accurately diagnose, and in some cases, treat in utero from ten to 15 of those problems.

Dr. Hobbins and Dr. Maurice J. Mahoney were leaders in the development of fetoscopy, a method of intrauterine visualization requiring neither laparotomy nor general anesthesia, as well as new techniques combining fetoscopy and ultrasound, for fetal blood sampling and skin biopsy. These techniques have expanded the number of fetal problems that can be diagnosed by amniocentesis to include hemoglobinopathies, deficiencies of certain clotting proteins, and other errors of metabolism, as well as congenital abnormalities occurring in repeated pregnancies, such as spina bifida cystica.

Yale-New Haven is one of only four or five medical centers in the U.S. to offer fetoscopy. "Our purpose is to avoid needless abortions," explained Ms. Venus, who is responsible for reviewing the patients' genetic situation, and for giving them and their families necessary information and support. "Before fetoscopy, a couple at risk for a sex-linked disease such as hemophilia would have amniocentesis, and if they found the fetus was a male, they would automatically consider abortion," she explained. "Sometimes these were perfectly healthy babies. Fetoscopy saves these healthy fetuses."

Drs. Mahoney and Hobbins think of fetoscopy as more than a diagnostic tool. "I think it will be part of the path to new theapeutics as well as diagnostic techniques - access to the unborn baby we never had before," predicted Dr. Mahoney.

Drs. Hobbins and Mahoney have collaborated on a number of procedures involving human genetic and diagnostic radiology techniques. They are currently participating in a nationwide study to test the accuracy as well as the risk factors of a new technique, chorionic villus biopsy, for obtaining fetal cells for prenatal diagnosis (See preceding article on the Department of Human Genetics - page 6).

Literally hundreds of women are referred to the Unit from the New Haven area, and from all over the U.S. and abroad for testing for conditions ranging from Down's syndrome to limb and structural abnormalities and obstructive uropathy. The Unit is a major referral center for women suspected of bearing hydrocephalic fetuses, who come here to learn whether or not the condition can be treated prenatally; and it conducts one of the most active maternal serum alpha fetal protein screening programs in the nation.

"We are able to definitely determine whether the fetus has a spinal defect, and if so, the size and precise location of that defect," explained Dr. Hobbins. "Indirectly, we are being asked what the quality of life is going to be for those babies. If the defect is low on the spine, there is a chance for surgical repair, if it is high, there is very considerable risk for severe paralysis."

In collaboration with Dr. Charles Kleinman, associate professor of pediatrics and diagnostic radiology, the Unit has been at the forefront in developments in fetal cardiology. Capable of diagnosing a large number of fetal cardiac anomalies of the gross structure of the heart, they are also doing research in the diagnosis and treatment of cardiac function.

Cardiac defects are a major problem affecting fetuses, according to Dr. Hobbins. About eight in every 1,000 fetuses have a cardiac problem.

For instance, fetal immune ideopathic hydrops has long been associated with interuterine death, with the exact cause unknown. "We found a cardiac reason in 13 of the first 16 patients referred to us with this diagnosis," said Dr. Hobbins. "The heart was structurally sound, but the beat was irregular, causing inadequate blood flow, and eventually, an excessive buildup of fluids."

After typing the various fetal heart arrhythmias, Dr. Kleinman began treating the condition by giving the mothers digitalis, or in more severe cases, similar but more effective newer drugs. "In a majority of cases, we were able to keep the fetus alive until it was mature enough to be delivered, and in some cases, we reversed the hydrops," said Dr. Hobbins.

A large portion of current research is directed toward monitoring fetal growth and nourishment, in an effort to circumvent problems caused by living in an unsuitable or alien uterine environment. "We think the key may be fetal blood flow," commented Dr. Hobbins. "Therefore, we are directing a large part of this research into evaluating blood flow in normal and in undergrown fetuses."

Dr. Hobbins and his colleagues have developed ways to measure the limbs, abdomen and head of fetuses, and even to determine their approximate weight, based on formulas designed in the Unit. These data, plus observations by
ultrasound of fetal behavior such as the character of movement, the r.e.m., breathing and the like, give clues as to whether or not the fetus is undernourished and suffering from relative asphyxia or hypoxia.

The fetal diagnosis program is a non-stop operation, starting early in the morning and going on well into the evening. At least 20 women are seen each day. The majority come only once or twice for diagnostic procedures and consultation, but others require further care, either on an outpatient or inpatient basis.

The high-risk outpatient program is extremely active. There are special programs designed especially for pregnant women who are diabetics, as well as for those who are hypertensive or who are Rh sensitive or toxemic.

"In the diabetes program we monitor both the fetal development and the blood sugar of the mother. We have spent a great deal of effort on developing ways to control the blood sugar level of the mothers in order to avert some of the problems that infants of diabetics are subject to," explained Dr. Hobbins. The survival rate of infants of diabetics, according to Dr. Hobbins, is almost the same as those of non-diabetic mothers, according to Dr. Hobbins. "Similarly, through research we are able to identify a certain population of women who are at risk for hypertension in pregnancy and intervene by prescribing medication and bedrest."

The new Maternal Special Care Unit was created for patients with acute complications of pregnancy - either a fetus at risk, or a mother with a serious illness such as pneumonia or liver disease. Directed by Dr. Peter Grannum, assistant professor of obstetrics and gynecology, it is staffed 24 hours a day by a team of specially trained nurses who offer the kind of care that generates a great deal of enthusiasm fan mail from former patients.

Because many of the infants born to high-risk mothers will spend some time in the Newborn Special Care Unit, the Maternal Special Care Unit is located adjacent not only to the prenatal diagnostic facilities, but also to the Newborn Unit. Physicians of the Newborn staff have joint appointments in obstetrics and gynecology, and become involved in the care of their prospective patients several weeks prior to their delivery.

"We consult with parents to tell them what to expect, and work closely with the staff of the Maternal Special Care Unit, as well as with others who may be involved, to coordinate the delivery," said Dr. Richard Ehrenkranz, clinical director of the Newborn Special Care Unit.

Research and advances in prenatal diagnosis and care aren't limited to the third floor of the Yale-New Haven Hospital. Physicians come here from around the country to attend training courses given bi-monthly in ultrasonography. Every year, two or three postdoctoral fellows from medical institutions abroad come for a year or two for training or research. "Having visitors from other institutions creates a stimulating environment here," said Dr. Hobbins. "This is a very exciting field to be in right now. We're making progress — and we have a way to go."

Looking to the future, he described current research that seeks to find safe and accurate ways to obtain samples of fetal liver and kidney tissue and pure fetal blood. "The excitement comes in what geneticists like Dr. Mahoney can do with these samples, using new techniques to diagnose problems, such as cystic fibrosis, that have frustrated us, and ultimately, using some of these same tools to treat many more problems prenatally."

"For instance, it may well be possible to inject a clone of cells from a normal fetus into the blood stream of a fetus who is dying because it is missing an enzyme," he continued. "As a result, that fetus will start producing these cells, which will multiply and the tissue will regenerate. In time, normal genes will produce normal enzymes in that fetus."

Thus, one of the foremost prenatal diagnosis/fetal medicine programs in the world looks to the future in its research to improve not only the survival rate, but also the quality of life for fetuses with severe problems.
A VERY SPECIAL PLACE TO BE BORN
After more than twenty years, ongoing research and the latest in technology combined with professionalism and dedication remain the heart of the first and one of the finest newborn intensive care units in the world...

Despite the bright balloons floating above and the cuddly toys in every isolet, it is obvious at once that the mission here is extremely serious. Against a background of the insistent wails typical of newborns and the steady hum and beep of hi-tech life support systems, teams of nurses maintain a constant vigil over their tiny patients.

A mother, scrubbed and gowned, lovingly feeds her baby, so fragile it hardly seems possible that he is able to take nourishment from the bottle. A doctor quietly consults with parents as they peer anxiously at their infant daughter, attached by many wires to monitoring equipment surrounding her isolet. The phone rings — and within minutes after the message is relayed, a crisis transport team is mobilized and on its way to bring in a critically ill newborn from a hospital 25 miles away.

The first of its kind in the country, the 44-bed Newborn Special Care Unit has earned a reputation of outstanding research in the cause and treatment of critical problems affecting premature infants. It has served as a model for similar units in hospitals throughout the world.

Almost 150 of the more than 1,000 infant patients last year were brought to the Unit from hospitals throughout Connecticut and from nearby states. Another 150 were born to high-risk mothers who were patients in Yale's Maternal Special Care Unit.

This prototype intensive and special care unit for prematures and newborns was founded in 1960 by Dr. Louis Gluck, who is now professor of pediatrics and reproductive medicine at the University of California, San Diego. "Knowing what constituted intensive care was difficult, lacking as we did, both guidance and precedent. Part of our work had to extend to the delivery room," he wrote in an article in *Yale New Haven* on the occasion of the Unit's twentieth anniversary. "We adapted existing adult and pediatric intensive care techniques to prematures and newborns. We developed transport procedures for patients from outlying hospitals and experimented with different architectural schemes, learning that babies received better care in large rooms rather than in the little cubicles prescribed by law...."

During those first few years, the basis for intensive care for newborns slowly developed. "We knew little of electrical hazards or of sophisticated techniques," said Dr. Gluck.

In 1962, Dr. Edward Hon, one of the leaders in the development of electronic fetal monitoring, returned to the Yale Department of Obstetrics, and with Dr. Gluck, founded the first known perinatal unit with joint training of residents and fellows.

"What incredible excitement there was in those days!" wrote Dr. Gluck. "Every day we developed more confidence and sophistication. This was infectious, and soon pediatric and obstetric residents began to appreciate the great opportunities of this new frontier: perinatal medicine."

Today, with Dr. Ian Gross, associate professor of pediatrics and obstetrics and gynecology, as director, and Dr. Richard Ehrenkranz, associate professor of pediatrics and obstetrics and gynecology, as clinical director, the Unit has a staff of four full-time physicians, four postdoctoral fellows and seven house officers. Ongoing nursing care is provided by a staff of almost eighty nurses under the direction of Jeryl Gagliardi, assistant clinical director of pediatrics.
The population of patients on the Unit is quite different from that of twenty years ago, when babies stayed there until they were well enough to go home.

"We are much more of a critical care nursery now," said Jeryl Gagliardi, director of the nursing staff, who has been on the Unit since the beginning.

As soon as they pass the critical phase, babies are transferred into a less intensive area of the Newborn Special Care Unit. Referral infants are returned to the hospital they came from once the level of care required is compatible with the care provided in the community hospital.

Today families are encouraged to be active participants in their infant's care. This family involvement really has changed since 1962, when there were many restrictions governing what parents were allowed to do. "We have become more and more liberal over the years," commented Ms. Gagliardi.

Parents are encouraged to visit even the most critically ill infants as often as they like, day and night. "We even suggest they bring in their other children. If a mother and father are worried about the baby here, it's better for the siblings to see the sick baby," she explained. "It helps them understand the source of their parents' worry."

Nurturing, too, is encouraged. A rocking chair is by every isolet. Mothers can cuddle and feed their babies, and in time, even bath them.

"As our understanding of the physiology of the very small premature infant has increased, we have become much more aware of the nutritional needs of these babies," observed Dr. Richard Ehrenkranz, associate professor of pediatrics and obstetrics and gynecology, and clinical director of the Unit. In collaboration with Barbara Ackerman, R.N., he has conducted research on human milk and on the ability of premature infants to absorb dietary nutrients.

Their research has demonstrated that milk produced by mothers of preterm infants contains as much as 20 percent more protein for four to six weeks after birth than does the milk of mothers of full term babies. Although it is not known precisely why this is, the extra protein may have a decided advantage for the growth of preterm babies who are fed their own mother's milk. In addition, this research has shown that preterm human milk changes as the duration of lactation increases, and that some nutrients, such as calcium and phosphorus, might not meet the nutritional needs of the growing premature infant.

Coincidental to these findings is an increasing move toward feeding mother's milk to premature infants — a trend some mothers feel is not only important to the health of their baby, but also important to the nurturing process. Milk is expressed by the mothers and stored in containers in the Unit's freezer until the baby is able to be bottle fed. Then, it is given in the sequence in which the mother has expressed it.

"Are we going to reach a limit in terms of the viability of very low birthweight infants?" pondered Dr. Ehrenkranz.

During the last 20 years physicians and nurses in neonatology have witnessed some of the most dramatic changes in the recent history of medicine. Less than a decade ago, the survival rate of infants weighing two pounds was less than ten percent. Today, approximately 70 percent of these babies survive with a prognosis for a quality of life that is generally very good.

"Now we care for infants who weigh one to one-and-a-half pounds. The survival rate for these infants is not very high — and some who survive have multiple problems. Those without multiple problems do very well," according to Dr. Ehrenkranz. "This is due not only to refinements in technology, but also to our increased knowledge of the pathophysiology of the smaller and smaller infant.

"The challenge today is how to improve their care — to better ventilate them, to nourish them, and to deal with or prevent problems technology sometimes cause," he added. "The greatest challenge, of course, is to prevent prematurity."
Research has contributed important new knowledge on a number of fronts in the care of premature infants. Much of the work at Yale has focused on fetal lung development.

Dr. Ian Gross, director of the Unit, (at left in photo below) is widely recognized for his research on respiratory distress syndrome, (RDS) a major problem of prematurity. The mortality rate for RDS has decreased dramatically in the last 20 years, due in large part to advances in the ability to ventilate premature infants until their lungs are capable of taking on the task. Nevertheless, prolonged ventilation causes chronic lung disease. RDS is also associated with an increased incidence of brain hemorrhage as well.

RDS of the newborn is believed to be caused by immaturity of the fetal lung, particularly the pulmonary surfactant system. Research by Dr. Gross and his colleagues suggests that fetal lung development, including the maturation of the pulmonary surfactant system, is under multi-hormonal control.

Tissue culture and animal studies have shown that some hormones act synergistically to promote the production of pulmonary surfactant during fetal life. This observation will soon be tested in a collaborative clinical trial involving Yale and three other major medical centers. It is hoped that administering a combination of hormones to women in premature labor, one day prior to delivery, will prevent the development of RDS in their offspring.

“You can’t help getting involved when you take care of these babies and interact with their parents,” observed Dr. Ehrenkranz, (above). “But it’s important to maintain a sense of objectivity so that when an infant doesn’t do well or dies, one can ‘get back on the horse’, doing the best for other infants.”

“The rewards are the kids. Seeing them when they come back for visits one, two or three years later. They’re great,” he said. “I still correspond with twin boys I took care of ten years ago. They live in the mid-west now.”
Dr. Perkins appointed professor and chairman of the Department of Pharmacology, effective January 1, 1985. Widely recognized as a superior administrator, teacher and researcher, Dr. Perkins has been professor and chairman of the Department of Pharmacology at the University of North Carolina School of Medicine in Chapel Hill, since 1977.

“The appointment of John Perkins to chair the Department of Pharmacology is extremely important to the School of Medicine,” said Dean Leon E. Rosenberg. “He has demonstrated outstanding leadership during the past seven years as chairman of Pharmacology at the University of North Carolina, while remaining among the national and international leaders in his scientific field concerned with regulation of the adenylate cyclase system by hormones and neurotransmitters.”

Dr. Perkins’ research is of broad pharmacological significance, particularly to studies of the neuronal and hormonal regulation of cardiac function and blood pressure, as well as for research on cancer cell growth. A graduate of Arizona State University where he received a B.S. degree in chemistry in 1960, and an M.S. degree in biochemistry in 1962, he received his Ph.D. degree in pharmacology from Yale University in 1966.

Following a postdoctoral fellowship in the Department of Biochemistry at the University of Washington in Seattle, he was appointed assistant professor of pharmacology at the University of Colorado Medical Center in Denver in 1968, and was promoted to associate professor in 1974. In addition to a Merck Faculty Development Award, he held a Research Career Development Award of the U.S. Public Health Service and the National Cancer Institute from 1972 until 1977, when he was appointed professor and chairman of pharmacology at the University of North Carolina.

Dr. Perkins is co-founder of the Journal of Cyclic Nucleotide Research, and serves on the editorial boards of Molecular Pharmacology and the Journal of Nucleotide Research. He is a member of the American Society for Pharmacology and Experimental Therapeutics, the American Society for Biological Chemists and the Association for Medical School Pharmacology.

Dr. Perkins succeeds Dr. Alan C. Sartorelli, who has been chairman of the Department since 1977. A leading cancer investigator, Dr. Sartorelli was appointed director of the Yale Comprehensive Cancer Center a year ago.
cancer epidemiology in the Department of Epidemiology and Public Health, and will coordinate the development of a cancer control research program of the Department and the Cancer Center. Prior to his appointment, he was adjunct professor of preventive and community medicine at Albany Medical College, Union University, and acting chairman of the Department of Epidemiology, School of Health Sciences, SUNY at Albany.

A graduate of King's College, Dr. Janerich received a D.D.S. degree from Temple University in 1963, and an M.P.H. degree from Harvard University in 1967. Most of his career to date has been as an epidemiologist with the New York State Health Department where he was appointed resident in 1965; director of epidemiology and population genetics of the Birth Defects Institute in 1968; director of the Bureau of Cancer Control in 1978; and acting director of the Division of Epidemiology, prior to his appointment in 1982 as Director of the Division of Community Health and Epidemiology.

Dr. Janerich is president of the American College of Epidemiology and was president of the Society for Epidemiologic Research in 1976-77. He is a member as well of the American Epidemiology Society and of the American Public Health Association.

Among numerous professional appointments, Dr. Janerich is a member of the Breast Cancer Task Force of the National Cancer Institute, a charter board member of the American College of Epidemiology, and an advisor to the National Institute of Child Health and Human Development. He is past president of the Society for Epidemiologic Research and of the American College of Epidemiology.

PLANS ARE UNDERWAY FOR THE SCHOOL'S $125 MILLION FUND RAISING CAMPAIGN

With the appointment last spring of Sue B. Dorn as Associate Vice-President and Director of Medical School Development, plans were initiated for the School's major fund raising campaign. Three staff members have been appointed—Daniel W. Vecchitito, Carole L. Corbett, and Ann Pecora Diamond—and a distinguished volunteer leadership committee chaired by Dr. James G. Hirsh, 438, has been formed.

In announcing the $125 million campaign to the alumni last spring, President A. Bartlett Giamatti noted that Mrs. Dorn is recognized as among the most outstanding institutional development officers in the country. Prior to her appointment as Vice-President and Director of Medical School Development, she served as Senior Development Officer for Yale University, and as Associate Director for Major Gifts during The Campaign for Yale. She has been a Vice-President for Resource Planning and Development at the Aspen Institute for Humanistic Studies and Vice-President for Resource Development and Public Information at the Bank Street College of Education, as well as Director for Promotion, Executive Compensation Service, the American Management Association.

A graduate of Stanford University, Mrs. Dorn received an M.S. degree in special education from the Bank Street College of Education. She is a member of the National Resource Committee and Chairman of the Greater New York Special Gift Committee of Stanford University. In 1976, she was the first woman and the first eastern member of the Stanford alumni to receive the Gold Spike Award, the University's highest award for outstanding volunteer service to the Alumni Fund.

Prior to his appointment as Deputy Director of the Campaign for the School of Medicine, Daniel W. Vecchitito was Associate Director of Development for the School. A graduate, cum laude, of Saint Michael's College in Winooski, Vermont, he has been a coordinator of grants and planned giving for Saint Michael's, as well as Director of Development at Merrimack College, North Andover, Massachusetts, and Associate Development Director of the Woods Hole Oceanographic Institution.

Carole L. Corbett was Director of Development for the Illinois Masonic Medical Center, Chicago, from 1977 until her appointment in June as Associate Director for Medical School Development. In addition to development, she has been involved in broadcasting as Producer/Director of Public Affairs Programming for Station WBBM-FM/CBS Radio and as Producer/Director for WGN Continental Broadcasting Company, both in Chicago. Ms. Corbett attended Vassar College and the University of California at Berkeley.

Ann Pecora Diamond has been named Assistant Director of Medical School Development. A graduate of Syracuse University, she attended Columbia University, and received a B.S. degree in biology from the University of California, Los Angeles. She did graduate studies in cell biology at the Yale School of Medicine, and was an associate in research in the Department of Internal Medicine from 1979 until her appointment with the Development Office.

The goal of the campaign is to raise $125 million: $33 million for facilities and equipment; $33 million for program and research, and $59 million for endowment.

CHIEF NAMED FOR SECTION OF IMMUNOLOGY

Dr. Philip Askenase has been appointed chief of the Section of Immunology, effective July 1, 1985. Well known for his studies in clinical immunology and in tropical medicine, Dr. Askenase has been a member of the Yale medical faculty since 1971. He succeeds Dr. John Dwyer, who has retired from Yale to return to his native Australia as chairman of the Department of Medicine at the University of New South Wales in Sidney.

A graduate of Brown University, where he received a B.A. degree, magna cum laude in physics in 1961, Dr. Askenase received his M.D. degree cum laude from Yale University in 1965. Following completion of internship and residency in the Harvard Medical Unit and Thorndike Laboratories at Boston City Hospital, he was appointed clinical associate in the Arthritis and Rheumatism Section, NIAMD, NIH. He was a British American Heart Fellow of the American Heart Association at London Hospital Medical College in London for a year prior to returning to the Yale School of Medicine in 1970 as a postdoctoral fellow in inflammatory diseases in the Section of Internal Medicine. He was appointed assistant professor of medicine the following year, and associate professor in 1975.

In 1978-79, Dr. Askenase was a Visiting Scientist in the Immunoparasitology Division of the National Institute of Medical Research, London. He was appointed associate professor of the Yale Department of Pathology in 1981, and the following year, he was named associate professor of medicine and pathology.

Dr. Askenase is a member of a number of professional societies including the American Association of Immunologists, the British Society for Immunology, the Reticuloendothelial Society, and the American Federation for Clinical Research.
A CHAIRMAN IS NAMED FOR SECTION OF GROSS ANATOMY

Dr. William B. Stewart, assistant professor of surgery in the Sections of Anatomy and Neurosurgery has been appointed chairman of the Section of Gross Anatomy. Recognized as an outstanding teacher, Dr. Stewart has been director of medical studies in the Section of Anatomy for the past two years.

A graduate of the University of Illinois, he received his M.A. degree from Western Michigan University and his Ph.D degree in anatomy from Emory University. Dr. Stewart came to Yale in 1976 as a NIH Postdoctoral Research Fellow in Physiology and Neurosurgery. He became a member of the faculty in 1978 as a lecturer in gross anatomy.

TWO MORE FACULTY NAMED JAVITS AWARD WINNERS

Dr. Linda M. Bartoshuk and Dr. William S. Cain have received Javits Neuroscience Awards of the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS). Members of the scientific staff of the John B. Pierce Foundation and of the faculty of Epidemiology and Public Health, they are psychophysicists considered leaders in studies of chemosensory response to environmental stimuli. Dr. Bartoshuk's research interest is taste sensation; Dr. Cain's work focuses on olfactory perception.

Over two million Americans suffer from a loss or impairment of the sense of taste or smell, according to a NINCDS report. Although the condition is not generally considered life-threatening, scientists now realize that the chemical senses have considerable medical significance, according to Dr. Bartoshuk.

In previous studies, she demonstrated that a subject's ability to taste PTC (phenylthiocarbamine), a bitter substance, was linked to a recessive gene, (phenylthiocarbamine), a bitter substance, to characterize the differences between tasters and non-tasters. Those with one or more dominant genes are much more sensitive to the PTC and are called "tasters." According to Dr. Bartoshuk, 70 percent of all Americans are "tasters".

The $683,000 Javits Award will support Dr. Bartoshuk's studies of additional compounds to characterize the differences between tasters and non-tasters. She will also evaluate various taster receptors and determine their location on the tongue.

Dr. Cain will apply his award of $835,000 to the development of procedures to compare the olfactory and trigeminal sensitivity of individuals suffering from olfactory impairment or loss with that of people with a normal sense of smell. He will also work to develop ways to diagnose different types of olfactory impairment and loss.

In addition, Dr. Cain will study the way in which individuals' perceptions of odors vary. This in turn will provide information about how to select items for clinical test of odor identification and offer a theoretical rationale for such tests, according to Dr. Cain. (More about Dr. Cain's work appears in the Fall 1980 issue of Yale Medicine.)

Drs. Bartoshuk and Cain are the fifth and sixth members of the School of Medicine faculty to receive Javits Awards. The award honors NINCDS grantees who have achieved a distinguished record of contributions in the field of neurological and communicative sciences and who are expected to be highly productive over the next seven years.

FACULTY PRACTICE PLAN WILL HAVE A NEW BUILDING OF ITS OWN

Plans are finalized and construction will begin soon of an ambulatory care facility that will consolidate clinics and offices of the Faculty Practice Plan which are currently scattered in 17 locations throughout the Medical Center. "Such consolidation will enhance patient convenience and provide opportunities not currently available for cost effectiveness," according to Arthur G. Isack, executive director of the Plan.

The four-story glass, concrete and brick building will be located on the southeast corner of Howard and Davenport Avenues. With adjacent parking and a pedestrian bridge to the Hospital, the new facility will include specialty and consultative services, x-ray and laboratory services, and a pharmacy. It will not include hospital beds or one-day surgery facilities.

The Yale Faculty Practice Plan was established in 1981 to bring together administrative, management and billing and collection activities of the existing clinical practice of the full-time faculty. Clinical practice, research and teaching are essential activities of a medical school, and the mission of the Plan is to enhance the academic responsibilities of the School by directly relating its clinical activities to teaching and research.

The building of about 90,000 square feet will be constructed at an estimated cost of $9 million on land presently owned by the Hospital and used as part of a parking lot.

A REGIONAL EYE CENTER AT YALE SOON TO BECOME A REALITY

Ground breaking ceremonies were held on November 16 for the new Eye Center at Yale. A regional, national and international referral resource, the Center will be the only facility of its kind between Boston and New York for persons requiring diagnosis and treatment of eye disease.

The $2.5 million project is the culmination of 23 years of planning by Dr. Marvin Sears, who has been chairman of the Department of Ophthalmology and Visual Science since it was founded in 1971. Under his leadership, the department has earned a world-wide reputation for its significant contributions to the development of treatments for blinding eye diseases.

The Eye Center will occupy the entire Boardman Building, which is being extensively renovated for the purpose. Centrally located in the Medical Center, and adjacent to the Department of Ophthalmology's research labs, it will integrate patient care with basic research and teaching activities.

With an entrance off Cedar Street, the first floor will include admissions and nurses offices and a general eye clinic; retinal and corneal diseases will be treated on the second floor; and glaucoma and strabismus treatment centers will be located on the third floor. The Center will include two operating rooms for eye surgery, a 15-bed inpatient recovery unit and research laboratories.

AN MR CENTER WILL BE BUILT UNDERGROUND ADJACENT TO THE LCI BUILDING

Excavation is expected to start this spring for an underground addition to the LCI building to bring together Yale's research and clinical activities in magnetic resonance technology, considered one of the most important developments in medicine in this decade. The Magnetic Resonance Center, including offices, laboratories and patient care rooms, will be equipped with two whole body scanners, a small animal
instrument and a high field spectrometer. The four magnets will have a combined strength of almost 450,000 times that of the earth’s magnetic field, and will require special construction and shielding to contain their tremendous force.

The MR Center will bring together distinguished scientists in the field including the directors, Dr. Robert Schulman, recognized as one of the world leaders in MR studies of the brain, liver, kidney and heart; and Dr. Richard Greenspan, well known for his research in clinical MR imaging. Dr. John Gore, associate professor of diagnostic radiology, who helped develop the first whole-body scanner, is another of the group who will be exploring the great potential of this new technology. They will collaborate on basic and clinical MR studies with colleagues including Drs. Joseph Coleman and Ian Armitage of the Department of Molecular Biophysics and Biochemistry.

**POSTDOCTORAL FELLOWS RECEIVE AWARDS**

Drs. Deborah Dyett and Gary Desir have been awarded Robert Wood Johnson Foundation Minority Medical Faculty Awards. Graduates of the Class of 1980, Yale School of Medicine, Dr. Dyett and Dr. Desir are postdoctoral fellows in the Department of Internal Medicine.

Dr. Dyett, who is a fellow in the laboratory of Dr. Stephen Malawista, chief of the Section of Rheumatology, received a grant of $120,000 for two years in support of her research to study the way in which neutrophils interpret messages and move, and how they release mediators of inflammation. Neutrophils are white blood cells important in protecting the body from infection. They are also important in inflammation, and are responsible for much of the pain and discomfort of diseases such as rheumatoid arthritis and gout.

“A better understanding of the inflammatory process may open new therapeutic avenues in the treatment of these and other inflammatory diseases,” said Dr. Dyett. A graduate of Harvard University, she received the John P. Peters Prize for an outstanding thesis, and the Henry J. Kaiser Family Foundation/National Medical Fellowship Merit Graduation Award in 1980.

Dr. Desir is a fellow in nephrology in the laboratory of Dr. Fred Wright, professor of medicine and physiology. The Robert Wood Johnson Foundation awarded him $119,673 in support of his research to determine the mechanisms that account for potassium transport in the proximal tubule. “A detailed knowledge of the mechanisms that account for ion transport could greatly enhance our understanding, and thereby our ability to treat many diseases,” said Dr. Desir. “It is noteworthy that the processes described in the kidney might pertain to other organs. Therefore our studies might be of general interest.”

Dr. Desir received his B.A. degree *magna cum laude* from New York University, where he was elected to Phi Beta Kappa, and received the University’s Founder’s Day Award in 1976.

The Robert Wood Johnson Minority Medical Faculty Development Program seeks to increase the number of minority faculty who can encourage and foster the development of succeeding classes of minority physicians. It offers postdoctoral research fellowships to minority physicians who have demonstrated superior academic and clinical skills and who are committed to careers in academic medicine and biomedical research.

Cheung Lam King, Ph.D., a postdoctoral associate in the Department of Pharmacology, has been awarded the first Leslie Warner Postdoctoral Fellowship of the Yale Comprehensive Cancer Center.

Dr. King, who received his Ph.D. from the Graduate School of Biomedical Sciences at the University of Texas, is studying the induction of terminal differentiation on malignant keratinocytes and determination of the differential gene expression during cellular differentiation. His research is directed toward a new approach for cancer treatment, inducing malignant cells to differentiate to mature cells with low proliferative capacity, hopefully without major effects on normal cells.

The Leslie Warner Postdoctoral Fellowship was established from gifts given in memory of the former chairman of the board of General Telephone and Electronics of Stamford, Connecticut.

**FACULTY NOTES**

**Dr. Allen C. Steere**, associate professor of medicine, received the Society Citation of the Infectious Diseases Society of America at its annual meeting in Washington, D.C. Dr. Steere was honored for his recognition of Lyme disease as a new entity and for defining its epidemiology, clinical features, microbiology, pathogenesis and treatment. Dr. Richard K. Root, former professor and vice president of the Department of Internal Medicine, now at the Seattle V.A. Medical Center, presented the award to Dr. Steere.

“Besides defining this new infectious disease and all of its important aspects, Dr. Steere’s investigations have demonstrated the bright side of effective scientific collaboration among investigators in the same lab or between different laboratories. In an age when competition to get there first is the overriding concern of many, the dramatic value of this collaboration is a stirring reminder of how the quest for scientific truth should properly supersede personal notoriety,” said Dr. Root. “ Appropriately, Dr. Steere has requested that his associate investigators at Yale University also be named in this citation. These are Dr. Stephen E. Malawista, chief of the Section of Rheumatology in the Department of Medicine, Dr. John A. Hardin and Dr. Joseph E. Craft, both members of the Section of Rheumatology, and Robert L. Grodzicki and Elise Taylor, research associates in the Section.”

**Dr. Arthur L. Horwich** received a 1984 Life and Health Insurance Medical Research Fund Award. One of six medical scientists to receive the award this year, he was recognized for his studies of the Expression of cDNA Encoding Human Ornithine Transcarbamylase. Dr. Horwich is assistant professor of human genetics.

The 1984 Heath Memorial Award was presented to **Dr. Raymond Yesner** at the Twenty-eighth Annual Clinical Conference of the University of Texas System Cancer Center. The award honors individuals who have made outstanding contributions to the better care of the cancer patient by the clinical application of basic cancer knowledge. Dr. Yesner, who is professor emeritus of pathology and director of Pathologic Anatomy, Laboratory Service at the West Haven VA Medical Center, is well known for his classification of lung tumors, recently adopted by the W.H.O.
At its 80th annual meeting held in Baltimore in December, the American Society of Tropical Medicine and Hygiene awarded the Walter Reed Medal to Dr. Wilbur G. Downs in recognition of his outstanding work in the field of tropical medicine; and the Richard Moreland Taylor Award to Dr. Thomas H.G. Aitken for outstanding scientific contribution to the field over a significant period of time.

Dr. Downs, clinical professor of epidemiology, is recognized worldwide for his research on malaria and other diseases attributed to arthropod-borne viruses. A consultant to the World Health Organization for the East African Research Institute in Entebbe, Uganda since 1970, Dr. Downs was associate director of The Rockefeller Foundation from 1963 until 1971, and head of the Yale Arbovirus Research Unit from 1965 until 1971. In 1977, he was the recipient of the Richard Moreland Taylor Award.

Dr. Aitken, who is senior research scientist emeritus, has been a member of the Yale Arbovirus Research Unit since 1971. An entimologist and parasitologist, he is best known for his research on mosquito-transmitted viruses.

Dr. Joseph F. Hoffman, Eugene Higgins Professor of Physiology, has received the Humboldt-Award in recognition of his past accomplishments in research and teaching. An authority on cellular and comparative physiology, best known for his investigations of the membrane transport processes, Dr. Hoffman, who is a member of the National Academy of Sciences and the American Academy of Arts and Sciences, is president-elect of the American Biophysical Society. The Humboldt-Award was established in Germany in 1860 to enable academically trained, highly qualified persons of foreign nationality to carry out research in the Federal Republic of Germany.

Dr. Edith Hsiung, professor of laboratory medicine, has received an honorary degree from Hubei Medical College in the People's Republic of China. Dr. Hsiung recently conducted a virology workshop at the College, and was also invited to lecture at the Institute of Virology, Chinese National Center of Preventative Medicine in Beijing, Tienjing Medical College, and at epidemic prevention stations in various cities in China.

The New Jersey Chapter of the American Diabetes Association has honored Dr. Ralph A. DeFronzo, associate professor of medicine, for his contributions over the past ten years to the advancement of diabetes research. Well known for his studies of diabetes, Dr. DeFronzo is co-author of “The Physician's Guide to Type II Diabetes (NIDDM): Diagnosis and Treatment” and the editor of a new journal, *Diabetes/Metabolism Reviews*.

Dr. M. David Tilson, professor of surgery has been named a Surgical Traveler of the James IV Association of Surgeons, Inc. The purpose of the Association is to foster the exchange of knowledge among the distinguished surgeons of English-speaking countries through an honorarium to Surgical Travelers who have made outstanding contributions to the art and science of surgery.

**BOOKS BY FACULTY**


**VERNON WILLIAM LIPPAD, M.D.**

Dr. Vernon W. Lippard, dean emeritus and professor emeritus of pediatrics, died of a heart attack on December 22 at his home in New Haven. He was 79 years old.

Few have had a more distinguished career in the field of medical education than Vernon Lippard, who served as dean of the Yale School of Medicine from 1952 to 1967. Before coming to Yale as dean, he taught at the Cornell Medical College, was associate dean at the College of Physicians and Surgeons of Columbia University, and was dean and professor of pediatrics at Louisiana State University and the University of Virginia in Charlottesville.

Born in Marlborough, Massachusetts, Dr. Lippard was a member of the class of 1926 at Yale's Sheffield Scientific School, and graduated from the School of Medicine in 1929. After training as a resident at the New York Nursery and Child's Hospital and the New York Hospital, he conducted research on the development of immunity to infections in infancy and in 1939, directed the Commission on the Care of Crippled Children in New York City, one of the first health projects sponsored by the U.S. Children's Bureau. Its report brought forcefully to the attention of the public the inefficiency and lack of coordination in treatment of children who had been paralyzed by poliomyelitis.

In World War II, Dr. Lippard served in the Army Medical Corps in New Guinea, and the Phillipines. When the war ended, he held the rank of colonel and was stationed in Manila as Chief of Medical Personnel.

Dr. Lippard was active in national and international health affairs. In 1949, he conducted a study of health services in Italy under the auspices of the World Health Organization. As president of the Association of American Medical Colleges in 1954-55, and as a consultant to the Surgeon General of the U.S. Public Health Service, he led the movement for federal aid to medical education which resulted in increased production of physicians by American universities and decreased dependence on graduates of foreign medical schools. The University of Maryland awarded him the honorary degree of doctor of science in 1955.

Under his leadership, the Yale School of Medicine experienced a fifteen year period of phenomenal growth. The faculty more than doubled in size. Three new academic departments were established. The annual budget grew
about five-fold, with a considerable increase in support from the federal government and foundations. The physical plant underwent impressive expansion with the construction of new educational and research facilities. Postgraduate educational programs and fellowships were greatly increased, as was the program of continuing education for practicing physicians. It was also at this time that the Yale-New Haven Medical Center was formally established.

After retiring as dean, Dr. Lippard served as Assistant to the President for Medical Development. Following his retirement from the faculty in 1971, he remained active in the field of medical education in this country and abroad. He was a consultant to the Josiah Macy, Jr., Foundation on its programs to aid medical education in developing countries. He served on the boards of a number of organizations, including the National Fund for Medical Education and the William T. Grant Foundation. He also served on various advisory committees here and throughout the country.

Dr. Lippard is survived by his wife, Margaret Isham Cross Lippard; a daughter, Lucy Rowland Lippard; and a grandson, Ethan Ryman.

It is suggested that memorial gifts, payable to Yale University, be sent to the Section of the History of Medicine, Yale School of Medicine, 333 Cedar Street, P.O.Box 3333, New Haven, Connecticut 06510. A.E.

COURTNEY CRAIG BISHOP, M.D.

Dr. Courtney C. Bishop, clinical professor emeritus of surgery, died on January 17 at his home in Wardsboro, Vermont. He was 79 years old.

Dr. Bishop was born and raised in New Haven. He graduated from Yale College in 1926, and was awarded his M.D. degree from the Yale School of Medicine in 1930. He was a surgical house officer with Dr. Harvey Cushing at the Peter Bent Brigham Hospital in Boston. When Dr. Cushing retired in 1932, Dr. Bishop moved to the New York Hospital to complete his residency under Dr. George Hoyer, then chairman of surgery. In 1938, he returned to New Haven and Yale, and was appointed to the staff of the New Haven Hospital, and a clinical instructor on the School of Medicine faculty.

During World War II, Dr. Bishop served in the Army Medical Corps with the 39th General Hospital, the Yale Unit stationed in New Zealand and on Saipan. When the war ended, he was chief of the surgical service with the rank of lieutenant colonel, and in November 1945, he returned to his practice and to his assignments at the Hospital and the School.

In the succeeding years, Dr. Bishop continued to serve both institutions in various capacities. In 1949, he was promoted to associate clinical professor of surgery and in 1958, to clinical professor. He had been appointed chief of surgery at the Grace-New Haven Community Hospital in 1953. When the community and University physicians merged into a single staff in 1960, Dr. Bishop was appointed chief of staff, a position in which he served with great distinction until his retirement in 1973.

For two decades he had worked tirelessly to improve cooperation between the Hospital and the School of Medicine and between members of the full-time faculty and their colleagues in the community. In 1981, in honor of his long years of service to the Hospital, the Board of Directors dedicated the newly renovated conference room in the Clinic Building in his honor.

Dr. Bishop is survived by his wife, Eleanor Alcorn Bishop; two daughters, and grandchildren. A.E.

ISIDORE SYDNEY FALK, PH.D.

Isidore Sydney Falk, Ph.D., professor of public health (medical care) in the Department of Epidemiology and Public Health from 1960 to 1968, died in New Haven on October 4, 1984, after a brief illness.

Dr. Falk’s distinguished career began when, after graduating from Yale in 1923, he was appointed to the faculty of the University of Chicago. He left that position in 1927 to become the director of the first major analysis of the national medical care system in the U.S., the Committee on the Cost of Medical Care. This committee’s final report in 1932, changed the history of health care in this country. The ideas advanced in this report of prepayment through some form of health insurance and of the advantages, in particular, of prepaid group practice medicine were areas in which Dr. Falk was to spend the rest of his life.

He was active in the efforts to enact Social Security and subsequently served Presidents Roosevelt, Truman, and Eisenhower as Director of Research and Statistics for the Social Security Administration from 1941 to 1954. After his retirement from the Social Security Administration, he was advisor on Social and Health Services to the World Bank and a consultant to the Republic of Panama, the U.S. Canal Zone, and various other countries on health care and social security programs.

He was a health services and medical care consultant to the United Steel Workers of America, where he assisted in the planning and development of a number of prepaid group medical plans in the United States and Canada. Yale University was fortunate in recruiting him in 1960 for the professorship in medical care. During his eight years at the school, this renowned man patiently opened to faculty, students and community leaders, the principles of medical care and health economics. Dr. Falk did not permit his reputation to erect a facade between him and his students, nor did he use his expertise as a platform for exhortation or polemics.

After his retirement from Yale, Dr. Falk became the executive director of the Community Health Care Center Plan in New Haven, the first HMO in Connecticut, and a flourishing example of this new health care delivery system. He was decorated with the Congressional Selective Service Medal and received the 1973 Sedgwick Memorial Medal of the American Public Health Association. J.D.T.
MERRILL ABNER BARATZ, M.D.

Merrill A. Baratz, M.D., associate clinical professor of pediatrics, died following an acute myocardial infarction on December 26, 1984. He was 63 years old at the time of his death.

Born in New London, Connecticut in 1921, "Judge" Baratz received a bachelor’s degree from Johns Hopkins University, following which he enlisted in the Army Air Corps, quickly rising to the rank of major. He served in the European Theater as a B-17 pilot, participating in 35 missions. Upon his return, he enrolled in the University of Rochester School of Medicine from which he later graduated.

Dr. Baratz came to Yale in 1950 to study pediatrics under Dr. Grover Powers, whose kindly, observant demeanor was passed along to his trainee. Following internship and residency at the New Haven Hospital, he established a private practice in New Haven and spent the next 17 years at it. When the Yale Health Plan was being developed, he was recruited as its first pediatrician and served as senior member of its Department of Pediatrics from 1971 until his death.

A kind and gentle practitioner as well as observant and careful clinician, his philosophical approach to the art and practice of medicine was, indeed, as he expressed in an autobiographical sketch published in a Yale Health Plan consumer newsletter a year ago, “My interests have been the care of a patient as a person; a part of our general society... it is important to understand how the patient reacts to him or herself, to his or her family, to the stresses of his or her society. An illness is a mixture of physiological forces and effects of psycho-social stress.”

Dr. Baratz was a fellow of the American Academy of Pediatrics, a member of the executive board of the New Haven Pediatrics Society, and a former president of the Connecticut and the American Orchid Societies. He was also a fellow of Yale’s Trumbull College and long-time participant in study groups at the Yale Child Study Center.

He is survived by his wife, Nancy Shemitz Baratz, a reference librarian in the Yale Medical Library, and by three children, Steven Baratz of Los Angeles, Susan Baratz of San Francisco, and Thomas Baratz, of Hamden. J.V.F.

DONALD PETER GRANGER, M.D.

On January 19, 1985, Dr. Donald P. Granger, associate clinical professor of neurology, died at age 55, following a lengthy illness.

Dr. Granger was born in New York City on October 6, 1929. After graduating from Antioch College, he attended the University of Pennsylvania School of Medicine, where he received his M.D. degree in 1954. He interned at the Cincinnati General Hospital and then served for two years in the U.S. Army in Korea.

Following military service, he began his residency in neurology at the University of Pennsylvania Hospital. In 1959, he came to Yale as a clinical fellow and in 1961, was appointed an instructor. He was engaged in private practice of neurology for the past 20 years and since 1964, was chief of neurology at the Bridgeport Hospital and the director of its electroencephalography laboratory, which he had established.

During this time he continued to be an active member of the part-time faculty and in 1974, was promoted to associate clinical professor. He was highly regarded as a clinical teacher by medical students and residents.

Dr. Granger was a fellow of the American Academy of Neurology and a member of the American Electroencephalographic Society and the American Epilepsy Society. He had served as chairman of the executive committee of the Board of Trustees of Antioch College.

He was the husband of Susan Simon Granger, film and drama critic for radio station WICC in Bridgeport. In addition to his wife and mother, he leaves a daughter, Janet Granger; a son, Donald Granger, Jr.; and a brother, Dr. Richard Granger of New Haven. A.E.

SPECIAL NOTICE TO ALUMNI

Arrangements have been made for all medical school alumni to receive the Yale Alumni Magazine regularly. The cost of the first year’s subscription is being borne by the School of Medicine.

The magazine, published eight times a year from October to June, previously was distributed only to Yale College alumni and others who subscribed.

In accord with the efforts of the Association of Yale Alumni (AYA) to involve graduate and professional alumni more actively in Yale affairs, the Yale Alumni Magazine has increased coverage of events and people in the graduate and professional schools. We hope that you read the NMR article in the November issue. Future issues will contain additional news and article for the School of Medicine.
The Alumni in Medicine Column
Notes from the President
Nicholas P.R. Spinelli, M.D.

TWO ALUMNI

One has seen these two veteran alumni for decades: at medical school social events in New Haven or New York, and at scientific conferences to which alumni are invited. They have always responded when called. In younger days, they have functioned as members of our Association's executive committee; been officers of this body; have offered sage counsel to members of our school's administration when consulted. Their service has spanned the tenure of seven deans. Regardless of the time frame, theirs has been a youthful, thoughtful, vigorous presence. Myron Sallick celebrated the 60th year anniversary of his graduation this past June; John Ogilvie enjoyed his 50th reunion the same weekend.

To share the pleasure of their company at these events is always an inspiration. The leadership of our alumni association struggles with the questions: What is our organization's purpose? Its goals? How do we reach them? Pondering the intense loyalty, the unflagging dedication of these two men is a source of wonder. What is the motivation, the driving force of these two men's feelings, so vital to the accomplishment of any organization's goal?

Myron Sallick is a soft spoken, gentle man of gallant bearing. His eyes twinkle and he smiles often when he speaks, recollecting the experiences of the early years of his medical education. John Ogilvie is a solidly built, gregarious man with a full thatch of white hair crowning what could still be an undergraduate-football-player-figure. He is inquisitive; open; direct; eager.

Both men have been practicing general surgeons; Dr. Sallick in New York City, and Dr. Ogilvie still active in Stamford, Connecticut. Both have had successful careers, enjoying the accomplishment and gratification of their professional objectives in surgery. Neither became outstandingly wealthy in doing it. Myron and John came to New Haven as poor students, dependent on Yale financial aid and part-time jobs for these goals to become possible. It has been an unvarying fact of life for six decades, it seems. Educational costs are always a quantum beyond the student's financial reach. The need to help the qualified student find monetary resources is always a high priority of school administrations in every era.

Reminiscing about their school days at Cedar Street many years ago comes easily and with enthusiasm to both men. It is remarkable how vivid and immediately accessible all of the details of these experiences are to them. The admission to medical school of both by an almost identical process, involving interviews with Dean Milton Winternitz in the presence of Miss Miriam Dasey, then registrar, is intriguing. Both these figures are now legends in the history of the Yale School of Medicine. The process of admission of these young men was both similar and relatively expeditiously decided. In both instances, Dr. Winternitz delivered the favorable judgement. The almost absurd simplicity of administrative structure of this, then small medical school, is affecting. There were so many fewer students; such a small faculty; and a curriculum which was largely yet to come in the breadth and its complexity of our more modern time. The modern science and technologies of medicine were then about to unfold. Both men, with a kind of reverence, describe the career counseling by the "great men of medicine" of the faculty, who thoughtfully guided them into their choosing surgery as a future direction. The names of Dr. Sam Harvey, Dr. Grover Powers, Dr. George Bloomer, among others, recur in their commentary; the "great men of medicine" — the motive forces among students then as now, as faculty, as role models.

Was it the simpler time, with communications and student identification then an easier task, responsible for the emergence of such devoted graduates? One doubts that, because it was not a universal phenomenon among their peers. Also, one can find among graduates in every decade since, behavior which identifies the "grateful" alumnus/a, the doctor seeking to repay with service in many arenas for remembered privileges. One indeed can identify the Sallicks, the Ogilvies, among current students in Yale medicine. Their names differ and they are often the student leaders. They are in a sense "alumni" in transit.

In the truest spirit of generosity, our old friends sought little in return after leaving Yale. Myron Sallick has one son who became a physician. "Not at Yale, incidentally, but I didn't expect Yale had to accept him. He went to Cornell and has done very well." Richard Sallick is now on the Yale faculty and heads a department in a Yale affiliated hospital. John Ogilvie has four sons. "None wanted to become doctors and two wanted to go to Yale College. They did."

Both men, in their later years, were to add to the most generous of their gifts to their alma mater, themselves, material gifts as well. Dr. Sallick has bequeathed, for eventual transfer to Yale, the old homestead where his children were born. Dr. Ogilvie recently provided funds for the restoration of the old amphitheater in the Hope Building (Dr. Sallick has described attending classes in the original as an undergraduate). When the dedication of this amphitheater was commemorated with the placing of a plaque bearing his name last June, Dr. Ogilvie was overwhelmed by the "generosity of the gesture". In both of them, modesty is not just an attitude but a passion. Their feelings perhaps are best paraphrased by the statement almost identically articulated by them both: "I can never repay Yale for what was given to me. What I have done, what I do for Yale now, is nothing compared to the opportunity the School gave me. I was exposed to the finest teachers of my time. I owe everything I did, or am, to Yale."

This dialogue was to be repeated this past June at reunion weekend. Following the annual meeting of the Yale Alumni in Medicine, Dr. Leona Baumgartner and her classmate, Dr. John Ogilvie, had just been awarded the Association's first Distinguished Services Awards for alumni. Dr. Baumgartner was expressing perplexity, a true sense of wonder, as though her diploma had been freshly awarded her. "I didn't do anything. Yale did it all for me. I was given a great opportunity." John Ogilvie nodded in energetic agreement.

The opportunity for alumni to contribute, in ways other than financial, to the activities of the medical school in the years after graduation has been severely limited by the fragile organizational structure of our alumni association. With the publication of our Directory and with it, our ability to find where our alumni colleagues are, new opportunities for participation are tantalizingly possible. In the past, only those graduates within commuting distance of New Haven could be tapped for the committee functions which formed the larger part of non-reunion activities. Only they could participate in the occasional social activity on campus. The potential for development of regional
groups, thereby enhancing the possibilities of more varied alumni functions, is an imminent challenge. The reality of continuity in the character of the alumni-school relationship looms more possible. School speakers might address regional graduates, thereby providing a more palpable sense of the school's vitality, of where our school is now. The massive burgeoning of medical scientific knowledge is a present challenge for the postgraduate to assimilate and maintain. The present and future physician is indeed becoming a documented, life-long student. Can a given student be linked to a given University in this life-long quest? Will the word "Alumni" become synonymous with "on-going students"? How exciting if alumni-as-students could become part of such a creative process.

Such conjecture renders even more seductive the portrait of our two alumni, our students of a simpler time. Their message to us, through the years, remains clear and lucid and germane: there is joy in achieving a professional dedication upon which Montefiore will build a $10 million Institute of Neurosciences, to combine under one roof, all the disciplines involved in the study of the brain and the functioning of the central nervous system, including neuropathology, neurology, neurosurgery, neurochemistry, neuropharmacology, neurophysiology, and psychiatry.

Dr. Zimmerman served on the faculties of Yale and of Columbia College of Physicians and Surgeons before going to Montefiore in 1946. Over the years, he has trained hundreds of neuropathologists, 137 of whom are now professors or department chairmen in this country, Japan, Israel and throughout many countries of Europe.

Among the many honors bestowed on Dr. Zimmerman is the Gold-Headed Cane of the American Association of Pathologists which he received in 1982. Created in 1919 to honor "a physician who represents the highest ideals in medicine and pathology", this award is the highest honor given to a pathologist, and has been awarded only 30 times since it was established.

Now at 83, Dr. Zimmerman carries a full teaching-research-writing program at the Montefiore Medical Center as chairman emeritus of the Department of Pathology and he also has just completed a year as scientific adviser/coordinator for the eight symposia held to celebrate Montefiore's centennial.

1947

Robert Chase is the subject of an article in the fall 1984 issue of Stanford Medicine. It notes: "Dr. Robert Chase has nurtured the specialty of reconstructive hand surgery from its infancy to a fine-tuned microsurgical and biomechanics science. Along the way, he's molded an image for himself among students, colleagues and patients that can't be beat."

The article continues to describe Dr. Chase's work: "His latest research project is bringing hand surgery into an era that could easily be mistaken for the stuff science fiction is made of. He is digitizing-assigning numerical values-to cross sections of each part of the hand. He's entering all this information, obtained by photographing millimeter-thick slivers one at a time, into a computer. He is then able to call up a three-dimensional, movable image of the hand parts on the computer screen. He can move the parts of the hand, isolate them, or make them larger in order to study them in new ways.

"By animating the hand we can study the relationship of one part to another, and the biomechanics of its function," he predicts. "We'll be able to learn exactly what parts can be substituted for others for surgical repairs. We'll also have the data that will allow us to construct artificial parts that are closer akin to human parts. If we better understand how the hand works, we're better able to duplicate it or substitute for it using robotic devices."

1956

At the 128th annual meeting of the Hawaii Medical Association William Hindle was installed as president. Dr. Hindle has been actively involved with Hawaii Medical Association affairs since 1965, has been a member of numerous committees and has served as an Association officer since 1978. He is currently in private practice at Straub Clinic & Hospital, is an associate professor of obstetrics and gynecology at the University of Hawaii School of Medicine and is very active with the American College of Obstetrics and Gynecology both locally and nationally.

1957

William Kissick was the keynote speaker at the Annual Meeting of the American Public Health Association in November.

Dr. Kissick is The George Seckel Pepper Professor of Public Health and Preventive Medicine at the University of Pennsylvania School of Medicine. He is also professor of health care systems in The Wharton School as well as director of the Health Policy and Planning Program of the Leonard Davis Institute of Health Economics.

Dr. Kissick has written on a wide range of issues such as training of public health professionals; planning and budgeting in health; cost/benefit in health planning; national health insurance; hospices and home care and multi-institutional delivery of services. He is currently completing a book entitled, "Who Shall Live? Who Shall Decide?: A Strategy for Health."

A brief note from Thomas O'Brien, who is living in Greenville, North Carolina, stated that he has been elected chief of staff for 1985 at the Pitt County Memorial Hospital, the teaching facility for East Carolina University School of Medicine.

1962

Michael Alderman was appointed as of September 1, to the position of chairman of the department of physiology at Albert Einstein College of Medicine, The George Seckel Pepper Professor of Public Health and Preventive Medicine at the University of Pennsylvania School of Medicine.
Dr. Aoki's research has focused on hormone-fuel interrelationships, especially the effects of the pancreatic polypeptide hormones, insulin and glucagon, on the transport and metabolism of low molecular weight substances in peripheral tissues. In his most recent efforts with the artificial beta-cell (Biostator), he has demonstrated the inability of conventionally treated diabetic patients to both oxidize and store carbohydrates; however, with his unique treatment, he has managed to restore both functions in severely compromised type 1 diabetic patients.

1968

As of November 1, Frank Lucente became chairman of the Department of Otolaryngology, Head and Neck Surgery at The New York Eye and Ear Infirmary.

Dr. Lucente received his training in otolaryngology at Barnes Hospital under the late distinguished Dr. Joseph Ogura, completing his residency in 1974. From 1974 to 1976 during military service, he was chief of the Department of Otolaryngology at the U.S. Public Health Service Hospital in Staten Island, New York. Also in 1974 he was appointed to the faculty of Mount Sinai School of Medicine where he became professor this year. Dr. Lucente's extensive teaching experience has included several visiting lectureships, an annual course at the American Academy of Otolaryngology, and the Paige and William Black Post Graduate School of Medicine at Mount Sinai. For his contributions to the American Academy of Otolaryngology's educational program, he won the 1980 Honor Award. He has published numerous papers and books including two medical textbooks, "Essentials of Otolaryngology" and "Diseases of the External Ear", and is on the editorial board or is a reviewer for several major journals. In addition to being a member of many professional societies, he serves on a number of local and national committees.

1973

Michael Kaufman was elected to fellowship in the American Academy of Pediatrics at a recent fall meeting of its executive board. To qualify as a fellow of the Academy, a pediatrician must have been certified as a fully-qualified specialist in the field of child health. Dr. Kaufman resides in Beverly Hills, California.

1974

Harry Shamoon has been elected to fellowship in The American College of Physicians and will be honored during the convocation ceremony at the College's annual session in Washington, D.C., March 28-31, 1985. Dr. Shamoon, a specialist in endocrinology, is on the faculty of the Albert Einstein College of Medicine. He and his wife, Rona, and sons Evan, Mark and Michael, reside in Scarsdale, New York.

HOUSE STAFF

1946

John McGovern has been elected a fellow of the Royal College of Physicians of London, England. Under a special bylaw of the Royal College of Physicians, fellowship may be conferred on "men and women of great distinction in medicine worldwide... and their number must not exceed eight in any one year." This year, fellowship was conferred upon six distinguished physicians—two from France, one from Germany and three from the United States. The other two Americans honored are Dr. James Wyngaarden, director of the NIH, and Dr. Baruch Blumberg. 1976 Nobel Prize winner in Medicine.
1983 - 84 ALUMNI FUND REPORT

FUND OFFICERS 1983-84

Medical School Alumni Fund
Lowell I. Goodman, '51, Chairman
Malvin F. White, '39, Vice Chairman
William K. McClelland, '47, Vice Chairman
John L. Cieply, '71, Vice Chairman
J. Roswell Gallagher, '30, Bequest and Endowment Co-Chairman
Samuel D. Kushlan, '35, Bequest and Endowment Co-Chairman, and Chairman, Former House Staff

Public Health Alumni Fund
Kathleen H. Howe, '56, Chairman

MESSAGE FROM THE MEDICAL SCHOOL ALUMNI FUND CHAIRMAN

The 1983-84 campaign ended with a grand total of $304,320 — not quite reaching the $325,000 goal. However, the average gift from alumni of $152 compared to $143 the previous year, indicates a heightened awareness of our program which is to provide income for the Student Revolving Loan Fund.

During the midpoint of our campaign we succeeded in earning the entire $50,000 Baumgartner Challenge award for new and increased gifts for student loans. This incentive plus over $77,000 from the reunion classes, gifts from non-reunion alumni, former house staff, parents and friends, contributed to our final total.

I appreciate the efforts of the Bequest and Endowment chairmen, the chairman of the former house staff program, the vice chairmen, the 85 class agents, the reunion phonathon volunteers, and the student telephoners who contributed their time and energy to this worthwhile program.

On behalf of the students and the school, I extend my sincere thanks to all the Fund’s loyal supporters.

Lowell I. Goodman, '51

MESSAGE TO THE PUBLIC HEALTH GRADUATES AND FRIENDS

This past year the proceeds of the 1983-84 Public Health Alumni Fund Campaign were designated the “Colin White Scholarship Fund” in honor of our popular professor of public health and statistics, who retired in June.

The final total — nearly $44,000 contributed by 646 graduates — represents 115 percent of the goal. This included funds earned as a result of the Leona Baumgartner challenge gift and over $5,000 raised by graduates in the New Haven area, who generously participated in two phonathons.

Many thanks to the energetic agents and all of the Fund’s loyal supporters who made our campaign for 1983-84 the success it was.

Jan A.J. Stolwijk
Kathleen H. Howe

A MESSAGE FROM THE DEAN

During the eleven years I have been Dean, I have been impressed by the generosity of the alumni of the School of Medicine. Your prompt and enthusiastic response to Leona Baumgartner’s magnificent challenge gift this year is yet another example of your loyalty.

Funds raised this year, amounting to $304,320, will be added to the Student Revolving Loan Fund. As you all know, helping our students meet the tremendous cost of medical education through scholarships and student loans is a high priority. Monies acquired through the Alumni Fund Campaign continue to be a mainstay in this effort. It is an important way for you to assure the quality of medical practice, research and teaching in the future.

I join the faculty and students in sending congratulations and appreciation to Lowell Goodman and the many volunteers who worked so hard on the 1983-84 Alumni Fund campaign, and to those of you who, through your continued interest and support, have made their fund raising goals a reality.

Robert W. Berliner

MEMORIALS

Deceased medical alumni (and friends) may be memorialized by a gift at any time to the Medical School Alumni Fund Endowment, in the name and class of the person so honored. The next-of-kin of a deceased medical alumnus/a is advised about this “In Memoriam Program” by mailing from New Haven some weeks after the School of Medicine receives notification of the death. The letter of information includes a copy of “The Testament of Remembrance” in which the names of all persons so memorialized are listed in the medical section by class, thus establishing a lasting memorial. Donors receive a personal penned note of appreciation from me. Your inquiries and interest are welcome at any time.

In 1983-84, the Medical School Alumni Fund received $2,123 from 18 donors of In Memoriam gifts. Deceased alumni and friends so honored for the first time in 1983-84 were:

Maurice Grozin '22
Julius Weiner '29
Paul Watson '30
Roland T. Wehler '32
Daniel Harvey '33
Milton Rose '35
W. Norman Sears '40
Robert F. Dine '41
John Taylor Adams '83
James Wells

Richard G. Jordan, Director, In Memoriam Program
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The report of annual giving for 1983-84 published in this issue of *Yale Medicine* lists the Class of 1944 as contributing $17,394 on the occasion of the 40th anniversary of its graduation. Through errors in record keeping as class agent for 1944, this total is in error, and should read $21,697. Either figure represents a record for giving by a reunion class to the Yale Medical School Alumni Fund. Funds pledged by my class members for one reunion gift were in part given by some in '82-'83 and some in the '84-'85 periods. Totals for those off years will thereby be reported erroneously high, including as they do, some reunion year pledges.

Pausing to analyze some aspects of this accomplishment is of interest:

- This record was achieved by one of the smallest post WWII classes (44 graduates/41 living) and possibly one of the least affluent, then as now.
- It required no gigantic effort on my or anyone’s part. Many economically stressed class members could contribute nothing. Some contributions emerged from grateful patients of class members, a gesture of gratitude to their doctor.
- A major factor in the achievement was the planning of the gift over time (a two-year period); and the setting of a goal (a tentative $1,000 per alumnus/a - preposterous for some, far short of the possibilities for others). Now that the unexpected total is in, it is apparent that a more rational goal of $25,000 could easily have been achieved. No pressure or last minute efforts were indulged.
- The process engendered no huckstering, no breach of confidentiality. It was followed by one of the warmest, most successful reunion weekends we ever had. Sixty-five percent of the class attended. No one ever knew of the individual contribution of his classmates.
- Without mention in speech or print, we contributed to one of the most vital causes our medical school — and every American medical school — faces today: student financial aid. The Revolving Student Loan Fund, in the current climate of medical education costs, has changed from a welcome assist to a vital life-line for so many students. The performance of my classmates, I believe, represents a manifestation of the rising of consciousness of such need.

This October, Chairman Lowell Goodman convened an organizational meeting to structure an advisory board of the Yale Medical School Alumni Fund, such as are now functioning in other professional schools at Yale. It will assist him as chairman to realize larger returns through such organizational effort, as have been realized where such boards function. As part of this organizational structure, I was appointed vice chairperson for reunions on the advisory board.

I report this experience as class agent for my class because the simplicity of the process and the response of my classmates was so gratifying, and worthy of emulation by other classes. As vice chairman for reunions, I am ready to assist all appropriate agents for such a task.

Finally, — and with apologies for my long-windedness — my salute to my extraordinary class!

N.P.R. Spinelli, M.D., *class agent, 1944 Med.*

---

**CLASS | AGENT(S) | 1982-3 PARTICIPATION | 1982-3 AMOUNT | 1983-4 PARTICIPATION | 1983-4 AMOUNT**

| 1979 | Michael Hausman | 17% | $770 | 20% | $830 |
| 1980 | Eduardo Alfonso | 17% | 848 | 26% | 830 |
| 1981 | Anthony Urbano | 13% | 665 | 19% | 530 |
| 1982 | Muriel Cyrus | 7% | 105 | 14% | 275 |
| 1983 | Michael Tom | 10% | 255 | | |

| Alumni | 50% | $377,120(1) | 48% | $254,711(2) |
| Former House Staff | 18% | 8,053 | 16% | 7,095 |
| Parents & Friends | 19% | 13,589 | 18% | 11,652 |
| Interest & Miscellaneous | | 10,492 | | 11,319 |
| Baumgartner Match | | 39,811 | | 19,542 |
| TOTAL | 42% | $449,065 | 40% | 304,319 |

---

1) includes $6,648 endowment income
2) includes $7,474 endowment income
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<th>AGENT</th>
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<tr>
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<td>Michele Visconti</td>
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<td>Amy Wilson</td>
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<td>Alumni</td>
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<td>$31,532(1)</td>
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<td>Baumgartner Match</td>
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<td>Interest &amp; Miscellaneous gifts</td>
<td>30%</td>
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<td>TOTAL</td>
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<td>$36,572</td>
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1) includes $50 endowment income
2) includes $104 endowment income
### Contributors to the Medical School Alumni Fund 1983-84

<table>
<thead>
<tr>
<th>Year</th>
<th>Contributors</th>
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<tbody>
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<td>Isidore S. Falk</td>
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<td>Henry Packer, M. Allen Pond</td>
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<td>Carolyn S. Koffler</td>
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<td>Virginia M. Good</td>
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<td>Joan A. Daley</td>
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<td>Margaret M. Fitzgerald</td>
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<td>Eleanor C. Connolly</td>
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<td>Henry G. Brickman</td>
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<td>1951</td>
<td>Clarissa E. Boyd</td>
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<td>Cahit H. Corbacioglu</td>
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<td>Jeanette Averill</td>
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<td>Calvin P. Hatcher</td>
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<td>Constance I. Beemer</td>
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<td>Lester M. Bornstein</td>
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<td>Janet Beach</td>
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<td>Bruce A. Barron</td>
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<td>Nicholas G. Alexiou</td>
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<td>Elizabeth C. Bells</td>
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<td>Robert M. Edwards</td>
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<td>Allen Cohen</td>
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<td>Peter T. Elliot-Wotton</td>
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<td>1968</td>
<td>Glenda Davis Anderson</td>
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<tr>
<td>1969</td>
<td>Susan S. Addiss</td>
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<td>Susan W. Balter</td>
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<td>1971</td>
<td>Victor R. Beeman</td>
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<td>1972</td>
<td>Emily M. Barclay</td>
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<td>Robert T. Beeman</td>
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<td>1974</td>
<td>Gregory Belok</td>
</tr>
<tr>
<td>1975</td>
<td>Clayton A. Ajello</td>
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</table>
Contributors to the Medical School Alumni Fund 1983-84

Parents and Friends
Kurt I. Altman
Dr & Mrs. Dorrance I. Anderson
Stanley August
Drs. John & Marie Babich
Hritos Bartzokis
Edwin Beall
Susanne Berman
Hormoz K. Broumand
Mr & Mrs. Ormonde I. Brown
Harriet F. Brown *
Mr & Mrs. Richard S. Childs
Chin S. Chung
Evis J. Coda
Mr & Mrs. Sidney J. Cohen
Willibald H. Conzen
Daniel W. Dr. Renzi
Mr. & Mrs. Kenneth T. Doran
William C. Drennan
Max Finkelman
Jose M. Garca-Madrid
William J. German *
Mrs. Harold Grant
Myron Greengold
Barbara J. Guilette
Kenneth H. Guitner
Murray Halperin
Frederick W. Hellman
Carl Hirshfield
Gloria F. Holmes
Jordan L. Holtzman
Harold Katz
Kenneth F. Kinney
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Joseph Lichman
Amy G. Lloyd
Shihuo Matsui
Mr & Mrs. Victor M. Newman
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Mary M. Olson
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Samuel Perlman
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Antonio Siu
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Thomas M. Tierney
Pable Vazquez-Calcerra
Mr & Mrs. Milton Weinberg
Jack Weingold
James Wells *
Tony Y. Wong
Rosalyn Yarmush
Mr & Mrs. Herman H Zusman

Contributors to the Public Health Alumni Fund 1983-84

Friends
John C. Bailar
Robert F. Babko
Ms. & Mrs. Norman W. Lindsey

* Deceased
Dear Fellow Alumni/ae:

I am extending an invitation to alumni/ae across the country to open their homes as hosts to Yale medical students who may be visiting your communities for residency interviews during their junior and senior years. The travel, bed and board costs for all students have become formidable at a time when education costs are approaching the outrageous. The student’s pause in any city is rarely more than 24 hours.

As important as the economic advantage to the students, is the opportunity for alumni to meet the current medical student and to receive present perspectives of medical education at Yale. The value to the student of counselling by graduates in the “real world” is incalculable. Insights into the region you practice in, specialty needs there (or lack of same); the academic, social and cultural character of the community you have been a part of, are obvious data to be communicated.

Please complete and return the form below if you could and would like to participate in this effort. Further details will be forthcoming upon receipt of your response.

Sincerely yours,

Nicholas P.R. Spinelli, M.D., ’44
President, Association of Yale Alumni in Medicine

---

Dear Alumni/ae:

As you know, there is more to a residency program than working 100 hours per week in a hospital. As Yale alumni no longer practicing within the Yale community, you are a valuable resource to current students attempting to evaluate postgraduate programs in different regions of the country. As host to a Yale student overnight, you would provide the student with a broader perspective on residency programs in your area (both medical and geographic). In return, you can expect to meet some interesting people while learning about the changes at Yale since your graduation. I hope you will choose to participate in this network — it could make a big difference to one of us.

Sincerely,

Barry Weinstock
President, Medical Student Council

If you would like to participate in this effort, or would like more information about it, please complete and return the form below and return it to the Office of Student Affairs, Yale School of Medicine, 333 Cedar Street, New Haven, CT 06510, or call Howard Levitin, M.D., Dean of Students, (203) 785-2644.
medical Library
341m
COVER: drawing from Osteographia or the Anatomy of the Bones, by William Cheselden, c. 1753, courtesy Yale Medical Historical Library. An article about research and treatment of bone disorders being done at Yale begins on page 8.
A NEW ERA IN MEDICINE

CAMPAIGN FOR THE SCHOOL OF MEDICINE

—so far, gifts and commitments for the $125 million capital campaign total $32 million

by D. Helaine Patterson

Students, physicians and scholars who use the Yale Medical Library daily may be aware that Dr. Harvey Cushing, the Sterling Professor of Neurology at Yale; Dr. Arnold C. Klebs, a bibliographer and incunabulist who lived in Basel, Switzerland; and Dr. John F. Fulton, Sterling Professor of Physiology at Yale, spearheaded efforts to establish the library that opened in 1941.

Today, the physician-triumvirate, who referred to themselves as the Trinitarians, would be proud and happy to know about the exciting plans to expand and renovate the library — plans that will move this already fine medical resource well into the 21st century.

Betsey Cushing Whitney of Manhasset, New York, and her family have given $8 million to Yale University to construct a major addition to the Yale Medical Library. It is the largest single gift ever received by the medical school.

Yale President A. Bartlett Giamatti announced the Whitney gift shortly after the University launched a $125 million capital campaign to increase endowment and meet research and program needs for the School of Medicine. It is anticipated that the campaign will last five years. Gifts and commitments, including that of the Whitney family, now total $32 million.

President Giamatti said that Yale will name the library the Harvey Cushing/John Hay Whitney Medical Library to recognize two great names in the history of Yale and medicine. They are, respectively Mrs. Whitney’s late father and husband.

Dr. Harvey Cushing, an 1891 Yale College graduate and internationally known neurosurgeon who taught at Yale, collected the works of early anatomists and surgeons. His collection forms the cornerstone of the School's historical library.

Dr. Cushing possessed a keen interest in books and even mended volumes himself. He advocated locating the medical library near the hospital because medical students and interns had little leisure time to walk across town to the University Library. He was a prolific writer, and his diaries, correspondence and papers now fill his study recreated in the medical historical library. In 1926, his biography of Sir William Osler, a British physician, earned him a Pulitzer Prize.

Dr. Cushing was married to Kate Crowell for more than 30 years. She took a great interest in her husband’s students and hosted teas for them at the medical school.

Betsey Cushing Whitney's gift — the largest single gift ever made to the Yale School of Medicine, will make possible the first major expansion and renovation of the Yale Medical Library in 44 years. Yale will name the Library the Harvey Cushing/John Hay Whitney Medical Library to recognize two great names in the history of Yale and medicine. They are, respectively, Mrs. Whitney's late father and husband.

Bella Z. Berson, director of the Yale Medical Library, right, is explaining the model of the Medical Library addition to Dr. William Summers, professor of therapeutic radiology, molecular biophysics and biochemistry and human genetics. Plans call for an additional 20,000 net square feet — a 50 percent increase in space.

View of the first lower level. This zone of light is the seam between the new structure and the old. It will create attractive places to read and study.

The Library will retain its Y-shape; however, the stem of the Y will be widened to gain additional space for staff and reader services. Entrance to the curved addition in the foreground will be through the Cushing Rotunda.

His philanthropy helped shape higher education in the United States. In addition to substantial gifts to Yale, through the John Hay Whitney Foundation which he established in 1949, Mr. Whitney focused on the field of education and on supporting individuals from minority groups who sought to make educational, social and economic changes in their communities. Mr. Whitney served as a Fellow of the Yale Corporation from 1955 to 1970, and as Senior Fellow of the Corporation from 1970 to 1973. In 1977, the John Hay Whitney Professorship in the Humanities at Yale was established.

"The magnificent gift of the Whitney family will help ensure that the medical library will continue to serve the scholarly needs of students, scholars and health professionals at Yale and from all parts of the world," said Mr. Giamatti, who expressed the University's profound appreciation to the Whitney family.

"With the explosion in biomedical information, the library is a primary resource used daily in sustaining the school's high standards of quality to train physicians, conduct research and provide patient care," the president said.

In planning the project — the library's first major modification in 44 years — a task force of researchers, physicians, librarians, information specialists and a development officer prepared a comprehensive plan to address the library's long-standing needs for additional space and ways to improve information access. Bella Z. Berson, associate University librarian and director of the Yale Medical Library, chaired the task force.

"By expanding the medical library, we will address the critical requirements for more space, and the program also will incorporate new, innovative technology for meeting the information needs of students, faculty, researchers and clinicians," Mrs. Berson said. "The library today has become a center for information access rather than simply a repository for information. In addition to gathering and maintaining information, the library also is faced with synthesizing the information, and automatic tools will help this process," she explained.

Computers will enhance the library's traditional program and extend the collection beyond its books and materials to include broader reference resources. In addition, new technologies will be used to automate the traditional library functions of acquisitions, cataloguing and circulation.

"The expansion and renovation will enable the library to bring books and readers together," Mrs. Berson said. Plans call for adding to and rearranging book stacks, creating a new periodicals room for all current issues, doubling seats in the reserve book room and enlarging the information room to bring more of the reference materials together and to accommodate computer terminals. A room where scholars can use the internationally acclaimed history of medicine collection also will be added.

The addition and renovation will provide 20,000 net square feet of space for books and readers, a 50 percent
increase in space. The library will retain its characteristic Y-shape; however, the stem of the Y will be widened to gain additional space for staff and reader services. The curved addition will be tucked between the arms of the Y, and visitors will enter it through the Cushing Rotunda. Lightwells and skylights will connect the existing library and the new addition, allowing light and spaciousness.

The architects are Alexander Purves and Allan J. Dehar, both of New Haven. According to architect Purves, the design for the library expansion has "a dual responsibility. On the one hand it must create urgently needed space for the growth and consolidation of the library's collections and look forward to the most innovative technology in information retrieval. At the same time, the design must look back to the traditional role of the library as a quiet place for reading and reflection... The new expansion maintains the architectural integrity of the older building while increasing its capacity in a form that supports and amplifies the original design."

Construction is expected to begin in the spring of 1986, and the project is scheduled to be completed in 1988.

At the campaign kick-off on May 28, Dr. Leon E. Rosenberg, dean of the School of Medicine, told faculty and friends gathered in Freshmen Commons, "Our School of Medicine is among the best anywhere. By many different measures, the accomplishments of our faculty, staff and students place us in a preeminent position in the medical world. But this is not a time when any of us can feel secure that the future of our school is assured.

"Competition from other institutions for human and financial resources is keener than ever. Confusion about the future of federal programs for biomedical research, training and health care is greater than ever," said Dr. Rosenberg, a human genetics researcher and former department chairman who became dean in July 1984.

"We can meet this competition and be insulated from this confusion only if this capital campaign is a success," the dean added. "Funds generated by the capital campaign will enable the School to advance its strong biomedical programs."

The medical school has launched the capital campaign after a two-year study by a faculty committee on the future of medicine at Yale. This committee, chaired by Dr. George Palade, Nobel laureate cell biologist, defined broad areas of needs for the Yale School of Medicine to advance biological knowledge and translate that knowledge into preventive, diagnostic and therapeutic applications.

Dr. James G. Hirsch, president of the Josiah Macy, Jr. Foundation and successor trustee of the Yale Corporation, heads the 13-member volunteer committee that will guide the campaign. To raise this huge sum increasing the school's security and flexibility in the biomedical sciences is "a daunting challenge, but the cause is just, the commitment is firm, the plans and timetable are well drawn. We shall succeed," he said.

Dean Rosenberg chairs the 10-member faculty committee on the capital campaign. Sue B. Dorn, associate vice president for development and director of the medical school development office, directs the campaign.

During the next five years, the school will seek gift support for the following areas:
- **$59 million for endowment**, including $29.5 million in unrestricted funds for the school's activities; $22.5 million for endowed professorships, and $7 million for endowed fellowships.
- **$33 million for biomedical research programs** in gene structure, molecular neurobiology, molecular oncology, neuroendocrinology, immunobiology, neuropsychopharmacology, clinical pharmacology, parasitology and tropical medicine, pediatric medicine, neurologic diseases and toxicology.

"Special efforts will be directed at obtaining start-up funds for Yale's rapid entry into activities that promise an important return in new knowledge and technologies that will benefit all humanity," Dr. Rosenberg said.

- **$33 million for facilities and equipment**, including funds to build a Center for Molecular Medicine; funds to expand and renovate the medical library, and to modernize laboratories and support facilities.

**THE COMPLEAT CAMPAIGN**

What's a campaign without a button? It's unheard of nowadays.

So the Yale School of Medicine's development staff, triggered by an article on a female cartoonist in a student magazine, *The New Journal*, enlisted the talents of artist and humorist Sandra Boynton, the 1974 Yale graduate who draws greeting cards.

"With the button, we wanted everyone to join in the spirit of the campaign and support it to the fullest extent possible," said Sue B. Dorn, associate vice president for development and director of medical school development. Faculty members, friends and guests who attended the University-wide campaign kick-off May 28 in the Freshman Commons, received the two- and -a-half-inch button.

"We hope that the medical school's Capital Campaign will be just as successful as Sandra Boynton's career," Mrs. Dorn said. -H.P.
CHILD DEVELOPMENT AT YALE

In evaluating a child, trainees in the Child Study Center are taught to look for healthy behavioral skills as well as developmental deficits.

by David F. Musto, M.D.

In the fall of 1911, the Dean of the Yale School of Medicine, Dr. George Blumer, assigned to a new faculty member one room, a table, and a chair in the Hope Building to start a Juvenile Psycho-Clinic. Here Dr. Arnold Gesell inaugurated at Yale services for emotionally disturbed children, as well as research into the normal development of children. Dr. Gesell's contributions would grow in significance and reputation until the Yale Clinic of Child Development would become known worldwide and its publications translated into many languages even today.

In 1930, a wing was added to the medical school's building to house the many activities which had become established during the past two decades. The Clinic of Child Development flourished there, and the group was made a department in the School of Medicine, the first program in child development to receive that recognition by any medical school.

The Child Study Center succeeded the Clinic of Child Development upon the retirement of Dr. Gesell in 1948. Located in the same quarters, but taking a more environmental and psychoanalytic approach to child development, the Child Study Center was established by Dr. Milton J.E. Senn. Dr. Senn was succeeded as director by Dr. Albert J. Solnit in 1966. The current director, Dr. Donald J. Cohen, followed Dr. Solnit in 1983. Thus, in the fall of 1986, clinical child development at Yale will celebrate its 75th anniversary.

Prior to the Psycho-Clinic, New Haven was the site of active work to improve the lot of the mentally ill and to understand better the nature of mental illness. Clifford Beers, a recent Yale graduate who had published a moving account of his own mental illness, A Mind that Found Itself (1908), established with the aid of prominent local individuals the Connecticut Society for Mental Hygiene, a group which would grow eventually into the National and World Mental Health Associations. In New Haven, Beers catalyzed a great deal of latent interest in normal and deviant mental development and functioning. Within a year of the publication of Beers' book, the National Committee for Mental Hygiene had been established.

Dean Blumer accepted the chairmanship of the National Committee for Mental Hygiene's Executive Committee. The head of Yale's Sheffield School, Russell H. Chittenden, chaired the Finance Committee, and the president and secretary of Yale served on the National Committee.
Formal child study at Yale began in 1911 under the leadership of Dr. Arnold Gesell, who founded the Yale Clinic for Child Development. The Clinic soon became known throughout the world for its detailed observation of children at different stages of development as well as for the innovative techniques, including photographs and films, it used to record them. At a time when the notion prevailed that environmental factors were solely responsible for the way a child developed, Dr. Gesell and his colleagues were able to present compelling evidence with their detailed documentation, that the way a child developed was in large measure a result of the pattern established by his or her biological constitution.

Along with James B. Angell, of the University of Michigan, whose son was later to become Yale's president. Thus, when Gesell moved to New Haven, he joined a fostering environment.

Gesell, while an assistant professor in the Department of Education, enrolled in the Yale School of Medicine and obtained his M.D. degree in 1915. He did this to gain “familiarity with the physical basis and the physiological processes of life and growth.” His life's work would be to achieve the goal expressed just before coming to Yale: “to make a thorough-going study of the developmental stages of childhood.” To accomplish this monumental task, Gesell introduced the use of the motion picture camera in the 1920s, as well as still photography. He was able to map the developmental stages and publish the results in atlases of human behavior and development. His studies on the normative development of children gave parents a welcome guide to their own children's progress.

He saw a child’s development proceeding from the pattern established by his or her biological constitution. The environment might assist or retard this development, but the general trend was there to begin with. He saw as his primary task the accurate description of these stages of development. He differed radically from the behaviorist position of J.B. Watson, who saw the child as being molded by life's experience and the psychoanalytic view, which combined the biological and experimental normative developmental pattern with the therapeutic effects of group and individual intervention.

With Dr. Gesell’s retirement in 1948, Yale considered how best to continue a leadership role in child development and concluded to establish the Child Study Center. Dr. Milton J.E. Senn of Cornell University, a nationally prominent pediatrician with a psychoanalytic approach to child development, was chosen to be the first director.

Dr. Senn expanded the training of psychiatrists and pediatricians in child development, inaugurated longitudinal studies of young families, and brought to Yale a series of investigators and teachers who would attain leadership in their fields. Dr. Sally Provence began her pioneering study of institutionalized children, and Drs. Ernst and Marianne Kris joined Dr. Senn in organizing a psychoanalytically oriented longitudinal study. Drs. Provence, Samuel Ritvo and Albert Solnit played a prominent role in the Yale Longitudinal Study and its 10-year followup.
Dr. Albert J. Solnit, director of the Center from 1966 to 1983, has collaborated with the late Dr. Anna Freud, left and Professor Joseph Goldstein of the Yale Law School to provide important guidelines, based on psychoanalysis, to assist professionals who are charged with making difficult decisions about child placement and custody. The results of their studies, published in two volumes, Beyond the Best Interests of the Child and Before the Best Interests of the Child, have generated controversy and discussion which have helped establish better means to understand and protect the child’s best interest and the family’s integrity. With Drs. Freud and Solnit is Dr. Julian Ferholt, associate clinical professor in the Child Study Center, pediatrics and psychiatry.

When Dr. Albert J. Solnit became director in 1966, the Child Study Center had a broad program of child therapy, training of child psychiatrists, and action research in the primary settings in which children grow up, including the family, pediatric settings, schools and child care programs and institutions. Professor Edward Zigler, first director of the Federal Office of Child Development, has played a vital role in the sustained teaching and research collaboration of the Child Study Center and the Department of Psychology. Dr. Zigler, as a leading scholar and champion of mentally retarded children and adults and as an academic leader in contributing to the definition and improvement of an effective national social policy for children, has played a vital role as a senior faculty member of the Child Study Center.

Dr. James P. Comer began what would be a remarkable demonstration that inner-city schools can revive and flourish. Yale law professor Joseph Goldstein accepted a joint appointment at the Child Study Center, establishing links with the Law School which have led to a better understanding of the best interests of the child and the implications of custody for the child’s mental health. Child Study Center faculty have reflected its leadership role in scholarship and the dissemination of state-of-the-art knowledge through publications in scholarly journals and books as well as through the editorial leadership provided by Dr. Melvin Lewis as editor of the Journal of the American Academy of Child Psychiatry and Dr. Solnit as managing editor of The Psychoanalytic Study of the Child.

Through the teaching and research of many of its faculty, the Child Study Center has gained recognition as a Center at which child psychoanalysis has flourished at the same time as more socially and biologically based studies have been carried out effectively.

Under the current director, Dr. Donald J. Cohen, biochemical studies of childhood autism and other serious afflictions of children have greatly expanded, and a long-term goal of the Child Study Center, an inpatient unit within the Yale-New Haven Hospital, has become a reality.

The Center approaches the 75th anniversary of child development studies at Yale with a range and depth of research and teaching about children unparalleled in its history. Major support for research and delivery of services has been provided by individuals and foundations—as well as by the Federal government—which made possible an expansion of Child Study Center programs and space. It also made possible vital collaborative activities with the Departments of Pediatrics, Psychiatry and Psychology such as the Children’s Clinical Research Center in Child Development and the Bush Center in Child Development and Social Policy, directed by Dr. Zigler. These centers have improved the resources of the Child Study Center in maintaining multidisciplinary training and research programs that have gained national and international recognition.
over the last decade there has been encouraging progress in

TREATING DISORDERS OF BONES

by Marje Noyes

Many thousands of Americans of all ages are victims of skeletal disorders as a result of injury or disease. Until quite recently, they had to struggle with the pain and crippling effects of these disorders with little hope for relief.

Without much fanfare, researchers have made considerable progress during the last decade in understanding how bone is formed, and in applying this important new knowledge to developing treatments for a number of serious bone disorders. Scientists at Yale have made important contributions in several areas to these advances.

Musculoskeletal disorders represent one of the leading causes of health-related expenditures in the United States — an estimated $59 billion each year — second only to diseases of the circulatory system. They rank highest among all disease categories when almost any indicator of the quality of life is concerned; and for people in their working years — ages 18 to 65, musculoskeletal conditions are the leading cause of disability.

While these disorders have an effect on people of all ages, the impact on the elderly population is especially severe. By far the most common and devastating affliction of the skeletal system is osteoporosis.

An estimated 20,000 women die each year of complications caused by postmenopausal osteoporosis — a condition of progressive bone loss. Many are unaware they have the problem until they fall, often for no apparent reason, fracturing a hip or their spine. As the expected life span of the population increases, the problem is bound to become even more prevalent.

Until recently, it was thought that once the initial rapid phase of postmenopausal bone loss occurred, the condition was irreversible. Research at Yale over the past ten years offers considerable evidence to the contrary.

A number of theories had been advanced and discarded about the cause of osteoporosis, when in 1964, several investigators noted that bone is a very dynamic, constantly regenerating tissue: bone turnover, or remodeling, follows a set pattern of resorption first, and then, new bone formation. This information led to a better understanding of the cause of osteoporosis — that is, a failure in the normal progression of the cycle from a resorption to a formation phase, which results in net bone loss. At about the same time, researchers also found that calcitonin, a naturally occurring hormone, is a powerful inhibitor of bone resorption.

With this information, it was logical to assume that calcitonin therapy would increase net bone formation in osteoporosis patients. Studies in 1971 proved to the contrary, that while calcitonin inhibits bone resorption, it also blocks bone formation.

In 1974, Dr. Howard Rasmussen, professor of medicine and chief of the Section of Endocrinology, and the late Dr. Phillippe Bordier of the Hopital Lariboisiere in Paris, conducted one of the first demonstrations that suggested the possibility that progressive bone loss in elderly women
can be reversed with medical therapy. Their hypothesis was to stimulate bone resorption, and at the same time, shorten the duration of resorption and allow formation to continue. The idea of stimulating resorption was considered heretical at the time, according to Dr. Rasmussen.

He and his colleagues reasoned that, if its secretion was stimulated, the parathyroid hormone — the one agent known to increase the rate of bone remodeling — could play an important role in the treatment of osteoporosis. By combining phosphate, which activates parathyroid hormone secretion, with calcitonin, they aimed their research towards minimizing bone resorption while maximizing bone reformation.

The results were encouraging. In a double blind pilot study of 26 women with osteoporosis who had experienced at least two major bone fractures, Dr. Rasmussen and his colleagues were able to demonstrate that the bone of elderly women is hormonally responsive and can, in fact, be stimulated to new formation.

A second study, with modified calcitonin and phosphate therapy, was done at Yale by Dr. Robert Lang, a colleague of Dr. Rasmussen. This study showed that while the dense outer cortical bone responded positively to the combined therapy, there was little or no regeneration of the trabecular, inner spongy bone.

Loss to the cortical bone can lead to hip fracture; loss to the inner bone can result in fracture of the spine.

Clearly, the researchers were on the right track — only further refinements to the therapy were necessary.

For the past fifteen years, first in Paris, and since 1977 at Yale, Dr. Roland Baron has been doing basic research on the cellular basis of bone remodeling. With his colleagues, Dr. Agnes Vignery and Dr. Mark Horowitz, he is recognized for important clinical work with bone biopsies, as well as for advanced basic research leading to a better understanding of the mechanisms involved in bone diseases.

Their research, supported by four grants from the NIH totalling about $1 million for the next three years, seeks answers to such basic questions as how do bone cells differentiate? What exactly is their function at each stage of bone remodeling and how do they communicate with each other? How does a site that has been resorbed know that it has to be repaired and how does the precursor of the cell that is going to resorb the tissue know where to go and how much to resorb? Why does it stop when the exact amount has been resorbed?

"All clinical problems involving the skeleton, whether they are endocrine-related, congenital or local problems such as arthritis or periodontal disease, or metastatic lesions, are mediated through these cells," explained Dr. Baron. "If we understand how they work, we will have a more precise basis for designing effective therapies for major bone disease."

Drs. Baron, Horowitz and Vignery are studying the interface between bone and bone marrow. The precursors of bone cells, blood cells and cells of the immune system are located in bone marrow. "It has been known for a long time that wherever and whenever there is local inflammation, there is bone destruction," Dr. Baron said. "One or more components of the inflammatory immune response has a side effect, which becomes, in fact, the main clinical problem — the activation of bone resorption. We became interested in trying to understand one aspect of the local regulation of bone cells by observing activities of cells in the immune system."

An important part of their research has zeroed in on the osteoclast activating factor (OAF), a lymphokine only recently associated with bone resorption. They have made significant progress in understanding the
Born in Tunis in 1944, Dr. Roland Baron was educated at the University of Paris where he received a Baccalaureate in experimental Sciences; a DDS, and a Ph.D. in oral biology. Following an academic career in oral biology in Paris, he came to the Yale School of Medicine in 1977 as an assistant professor of pathology. In 1979, he was appointed assistant professor of internal medicine and cell biology, and in 1982, he was promoted to associate professor of medicine and cell biology.

He is intensely involved in research into bone cell biology and the pathophysiology and treatment of skeletal diseases. Current projects in which he and his colleagues are involved include studies of bone cell function and differentiation, the role of the immune system in bone remodeling; and the pathophysiology and treatment of osteoporosis, osteopetrosis and of renal osteodystrophy in children.

Based on these findings, Dr. Robert Lang is conducting a study to test a new therapy to increase bone mass in women with postmenopausal osteoporosis who have had bone fracture. This study, funded by a $100,000 grant from the NIH, will refine previous studies by Dr. Rasmussen and Dr. Lang, with the goal of increasing the regeneration of not only the cortical bone, but of the trabecular bone as well.

"Basically, in this study, which like the earlier studies, involves combine calcitonin and phosphate therapy for 12 months, we will increase the frequency and amount of calcitonin dosage. Recent research has shown that more frequent dosages are necessary to turn off bone resorption," explained Dr. Lang.

This study will be further enhanced by interpretation of bone biopsies in Dr. Baron’s laboratory, where bone resorption and formation can be measured, and by a new procedure using CT scanning to measure bone density. Developed by Dr. Pamela Jensen, associate professor of diagnostic radiology, the system enables investigators to note even very subtle changes in bone mass, and has been extremely useful in following the progress of therapy in osteoporosis patients.

The pilot study will also include nutritional counseling and an exercise program of weight-bearing activities. "Diet and exercise are extremely important factors in osteoporosis therapy," said Dr. Lang. "Although we were unable to prevent trabecular bone loss in our previous study, most of the patients felt much better because they had been put on a diet and exercise program which was clearly helpful, not only for strengthening their muscles and bones, but also for their general well being. This is very important."

Estrogen replacement therapy reduces the rapid loss of bone that occurs at the onset of menopause, but it is of little or no therapeutic value once osteoporosis is established. On the other hand, there are indications that good nutritional habits, including a diet high in calcium and low in animal protein, and regular exercise such as walking or bicycling, may slow down, and perhaps even reverse the degenerative process.

"Most of the women we have seen in our studies have had very poor nutritional habits and do very little in the way of exercise," commented Dr. Lang.

If the present pilot study with calcitonin and phosphate proves successful in increasing bone formation in osteoporosis patients, the research will also benefit patients with other disorders resulting in bone loss, including renal diseases, primary biliary cirrhosis and other gastrointestinal disorders. "We are very confident that within this decade we will have a treatment for increasing bone formation," predicted Dr. Lang. "If we can achieve it in menopausal osteoporosis, there is every likelihood that we can do it for other conditions as well, perhaps with slight variations in therapy."
Many thousands of Americans of all ages are victims of skeletal disorders as a result of injury or of diseases such as rheumatoid arthritis or bone cancer. Until quite recently, treatment alternatives for the crippling effects of these disorders were limited in scope, and provided little hope for relief.

Recent advances in orthopedic research and practice hold promise for many of these patients. One of the most encouraging developments has been progress in the transplantation of human bone to replace injured or diseased segments of arms and legs.

The Yale School of Medicine is at the forefront in developing techniques for the preservation and transplantation of major bones. The Yale-New Haven Medical Center is among few centers in the country which routinely bank and implant whole bones or large bone segments, as well as smaller, but equally important bone grafts. One or two such operations are performed here each month. About one-third are to replace bone segments compromised by tumors; the balance involve accident victims who have severely damaged a limb, and for patients undergoing reconstruction as a result of arthritis.

Much of the research and its clinical application has been done by Dr. Gary Friedlaender. As his titles indicates, he is a leading expert on tissue transplantation, who neatly balances his activities in many of its issues. He is deeply involved in research, some of which is in collaboration with Dr. Roland Baron, to improve understanding of the biologic and immunological aspects of bone transplantation, and in studies of the effects of chemotherapy and radiation therapy on the skeleton; he is responsible for the clinical care of orthopedic patients; and he is totally committed to providing national resources for information and programming support of organ and tissue donation and transplantation.

"About 100,000 Americans require bone transplants each year, yet less than five percent of these patients were able to benefit from the use of banked bone last year because there weren't enough replacement bones available," noted Dr. Friedlaender. Banked bone works well and avoids sacrifice of normal bone in patients to provide graft material for another site. Also, some people can't donate their own bone graft because the size, shape or quantity required is not available or is too large to take from their own body. "There is a great need to communicate these facts to potential donors and their families," continued Dr. Friedlaender.

Advances in transplantation of bones began in the 1950's, when it was observed that bone allograft immunogenicity was reduced by freezing. Both the clinical science and banking methodologies required for transplantation of large bones have been substantially improved since then, reflecting to a large extent new knowledge of bone graft biology, cryopreservation techniques, immunobiology and critical analysis for factors contributing to clinical results.

While amputation of an arm or leg is devastating for persons of any age, it is particularly tragic for young people. This is one reason why progress in bone transplantation is so important.

Metallic and plastic implants to replace arthritic or fractured hips have been used with some success for several years, but implants of these materials to replace large segments of bones of the leg have proven less than satisfactory because they are not stable and are increasingly prone to loosening, as well as to failure of materials after a time. Furthermore, they are especially vulnerable in the rough and tumble life typical of a younger.
Dr. Gary E. Friedlaender, professor of surgery (orthopedics), is chief of the Section of Orthopedic Surgery, director of the Orthopedic Oncology and Transplantation Immunobiology Laboratory and founder and director of the Bone Bank at Yale. In addition, he is a founder and immediate past-president of the American Council of Transplantation (ACT)—a centralized national resource for information and programming support on organ and tissue donation and transplantation. He is also president of the American Association of Tissue Banks.

A graduate of the University of Michigan, he received an M.D. from the University's School of Medicine in 1969. He first came to Yale in 1971 as an NIH postdoctoral research fellow in surgery, oncology and immunology, as well as a resident in orthopedic surgery. It was here that he first became interested in bone transplantation. In 1982, he received the Kappa Delta Award for Outstanding Orthopaedic Research from the American Academy of Orthopaedic Surgeons and the Orthopaedic Research Society.

When feasible, bone autografts—replacement with segments of the patient's own bone—make the most viable and successful transplants, but the supply is necessarily limited. An alternative, under ongoing investigation by Dr. Friedlaender and his colleagues is that of the cadaveric allograft, which is replaced by host bone over a period of time. Virtually any bone suited to clinical application can be removed from cadavers, but generally, the long bones of the extremities, the pelvis, and the ribs are the most useful for this procedure.

Effective bone banking is of the essence to the success of these transplants. "In order to support the challenging and innovative contemporary approaches to limb sparing reconstructive surgery, as well as the need for bone grafts used to treat a wide variety of traumatic, degenerative and benign neoplastic skeletal disorders, it is necessary to establish a safe and effective source for allogeneic tissue," commented Dr. Friedlaender, a crusader for a systematic approach to donor selection, tissue removal and preservation methodology.

Unlike organs which must be removed and transplanted almost immediately following death, bones and other tissues may be removed as long as 24 hours later, and stored for five years. At Yale, they are removed under sterile operating conditions, cleaned of muscle and dipped in glycerol of dimethyl sulfoxide for cryoprotection before being placed in a plastic bag and wrapped in sterile cloth. They are stored in a freezer at -70 degrees Fahrenheit until required for transplantation. Each specimen is x-rayed to record its size and anatomical shape.

When bone grafts are not reconnected to a blood supply immediately, they are subjected to a complex process of revascularization and replacement known as "creeping substitution"—a predictable sequence of events including cell necrosis, revascularization, resorption and eventually, replacement. In bone graft procedures, the replacement bone segment is fitted in between undamaged existing bone. Once in place, the graft is invaded by blood vessels from the host site. This new blood supply carries the primitive mesenchyal cells of recipient site origin that differentiate into bone resorption and bone remodelling cells.

Initially, the bone becomes weaker than the original, but within months, it begins to strengthen and to build new bone from the old. Within five to ten years, the body will replace most of the donated bone with its own, a process identical to the replacement of bone which normally occurs.

Dr. Friedlaender has trained with and collaborated for several years with researchers in the Orthopedic Oncology Unit at Massachusetts General Hospital in clinical studies of allograft transplantations—mostly for malignant or aggressive tumors. That group now has experience with 300 major transplants in patients who are from 11 to 69 years old.

The types of graft procedures included osteoarticular, in which an articular joint was included with the bony replacement part (the majority of transplantations); intercalary, in which the graft consisted only of a portion of the shaft of a long bone; and allograft, in combination with a joint prosthesis (most of these have been used for hip joint replacement).

All of the patients have been carefully followed and to date none has shown what could be interpreted as a "rejection". Furthermore, data suggest that the graft is incorporated and slowly replaced by the host after an initial period and that the prognosis for long retention and function of the implanted segment is reasonable, providing there are not problems of
The idea of transplantation of bones may have originated when, according to the Bible, a rib was removed from Adam to create Eve. There are numerous other references in literature and art to allogeneic and xenogeneic hybrids, including the canvases of the 15th century masters, Fra Angelico and Bellini, showing Cosmos and Damian, the patron saints of medicine replacing the diseased leg of a light-skinned patient with that of a Moor.

Today, through clinical and laboratory research at institutions including Yale, bone allografts are becoming an increasingly viable treatment for a number of bone disorders.

infection or fracture early on.

“We aren’t there yet. The system needs further study — but clearly, these early results suggest that continued research is definitely warranted,” said Dr. Friedlaender, who is principal investigator of a national, multi-institutional study of bone graft biology, banking immunology and clinical results. A major portion of the project will be to correlate the long-term follow-up clinical, x-ray and histological data with an assessment of humoral evidence of the immune response. It is hoped that these data will provide a means of selection of the best graft for each patient. “This may be the key to avoiding failures we now naively attribute to the immune reaction,” explained Dr. Friedlaender.

In summing up the work to date, Dr. Friedlaender emphasized the tremendous need to educate both physicians and the public to the need for donor tissue and organs. “With all of the advances in surgery, in drugs that reduce rejection and in the biological understanding of transplantation, we’re getting to be in an increasingly better position to do more and more transplants. So, the current shortage of organ and tissues will become severe in the future,” concluded Dr. Friedlaender.
MORE THAN ONE MISSION

Dr. Curtis L. Patton, Professor of Epidemiology (Microbiology)

by Marje Noyes with Charles Eguagu

Sitting in his office, which is absolutely packed with photographs and travel posters, and stacks of journals and papers piled precariously high, Dr. Curtis Patton discussed his career. It didn't take long for a visitor to figure out that, early on, he had carefully charted his course to accommodate a commitment to encourage young minority students to enter careers in science, along with his own strong attraction to research and teaching.

A man of many interests and talents, Dr. Patton is first and foremost an established parasitologist who has provided important new insights into the biology of African trypanosomes. He is as well, a distinguished educator who, in the words of a former postdoctoral student, is as committed to leading his students into unique career opportunities as he is to the advancement of tropical medicine. "It was a pleasure to study with him," said Dr. Larry Ruben.

Dr. Patton grew up in Birmingham, Alabama in a very supportive environment. His father, the principal of a local high school, and his mother, a music teacher, encouraged his curiosity, and by so doing had a profound influence on his educational and career decisions. He was a good student, who admits to occasional minor mischief along the way, and who graduated with honors from high school.

At Fisk University, "the going was a lot rougher," he recalled. A small, private, predominantly Black liberal arts school in Tennessee, Fisk provided extraordinary opportunities for scholarship as well as for leadership. It was later, though, as a graduate student at Michigan State University (where he received an M.S. degree in 1961 and a Ph.D. degree in 1966), that Dr. Patton first became interested in parasitology. This interest was furthered at Rockefeller University, where as a guest investigator and Fellow from 1967 to 1970, he was exposed to the work of unusually talented scientists and other resources in biomedical research.

"Yale offered an opportunity to continue some aspects of this experience," he said, "and I was excited about the prospects of continuing my work here."

Soon after his appointment as assistant professor of microbiology in 1970, Dr. Patton received a U.S. Public Health Service Career Development Award which offered a tempting opportunity to be rid of administrative and teaching responsibilities to devote full time to his research. But, it didn't work out quite that way.

"At the time, I was one of a very few Black faculty in the University. I felt an obligation and responsibility to be seen as a teacher as well as a researcher," he explained.

Besides, I really enjoy teaching. Having bright, energetic people around, who may be naive about some of the problems you are most concerned with, provides an opportunity for looking at things in a very different way."

By teaching, he could also advance the cause for parasitology. "It is difficult to believe now — when so much attention is being paid to tropical medicine at all levels — but when I first came to Yale, the field was not regarded as either important or very interesting to many of the leading biomedical scientists," explained Dr. Patton. For several years, as the only parasitologist in the entire University, he taught undergraduates as well as medical and public health students. (There are now three research groups studying parasitic organisms in the Department of Epidemiology and Public Health, and five others in the Departments of Medicine and Pharmacology, as well as groups elsewhere in the University.)

Today, much of his teaching takes place in his laboratory on the eighth floor of the Laboratory of Epidemiology and Public Health, where studies on the cellular and molecular biology of African trypanosomes are focused on antigens that may be of importance in immune responses as well as to regulatory problems.

"When an organism lives on or in another organism, it..."
has to figure out how to get what it needs for its own well-being without being destroyed by its host," explained Dr. Patton. "We have the feeling that the interface between the membrane of the parasite and its host is most important in the host-parasite complex. To exist, the parasite must remove its life sustaining substances across the host membrane and across its own membrane into its body or cell — and it has to do this very skillfully, because the parasite membrane is also the site where host immune responses are most effective."

In their research, Dr. Patton and his colleagues have isolated and characterized a calcium-binding protein, calmodulin, in trypanosomes. Similar to protein found in the host, calmodulin is present in all eukaryotic cells and is highly conserved throughout evolution. Although trypanosome calmodulin exhibits a high degree of amino acid sequence homology with the host protein, it is sufficiently different to be termed "unique". Current evidence suggests that specific residues interact with receptor proteins and drugs. Some of these may be unique for trypanosomes, and thus useful in the development of novel, trypanosome-specific chemotherapies. This research recently received major grant support from the National Institutes of Health.

In addition to being able to contribute new knowledge to the understanding of the immune responses and regulatory problems, there is the very real satisfaction of contributing basic knowledge which may eventually lead to the control of diseases which have for years devastated Third World populations. Trypanosomes, for instance, cause African sleeping sickness in humans, and in animals, they cause ngaña, a disease which has all but eradicated cattle farming in many parts of Africa.

"As important as these organisms are as research tools, from a humanistic view, they are even more important as agents of suffering, and they deserve intense study for this reason as well," said Dr. Patton.

Because of his reputation as an outstanding Yale scientist and educator, Dr. Patton has been asked to participate on perhaps more than his share of committees and review boards — especially those involved with minority students. Although time consuming, he regards these activities as stimulating and necessary.

"There is a notion that Black students are not traditionally interested in careers in science. The very first Black to receive a Ph.D. in the United States, Eduard Alexander Bouchet, received that degree in physics from Yale, when no more than a dozen Ph.D.'s had been awarded in the country — in the sciences or any other field for that matter," said Dr. Patton. "Unfortunately, the percentage of Blacks in the sciences today is very low."

Taking a leadership role in trying to increase this percentage, he serves on committees at Yale as well as of the National Research Council and the National Institutes of Health. One of the most important of these is the NIH Committee for Minority Access for Research Careers, of which he was chairman. This committee, which spent considerable time visiting colleges and research institutions, reviewing curricula and the preparation necessary for developing careers in the biomedical sciences, has been influential in attracting a large number of minorities to the sciences.

In seeking a career in science, Dr. Patton believes one has to be driven, but not necessarily obsessed with the notion that it is important to make a contribution to science and perhaps, indirectly, to the nation and the world.

"Those of us who are driven probably find it most satisfactory to be in a place like Yale, which is an exciting environment for scientific pursuits," he concluded.
NOTED NEUROSCIENTIST IS APPOINTED TO RESEARCH CHAIR

Dr. George K. Aghajanian has been appointed Foundations Fund for Research in Psychiatry Professor. A neuro-psychopharmacologist widely recognized for his studies on the effects of psychoactive drugs on the mammalian brain, Dr. Aghajanian has been professor of psychiatry and pharmacology since 1974.

Born in Beirut, Lebanon, Dr. Aghajanian has been at the Yale School of Medicine almost continuously since his graduation from Cornell University in 1954; first as a medical student in the Class of 1958, then as an intern in the Department of Internal Medicine, and from 1959 to 1963, as a resident and postdoctoral fellow in the Department of Psychiatry. Following two years in the U.S. Army Medical Corps, Dr. Aghajanian returned to Yale as assistant professor in the Department of Psychiatry. He was promoted to associate professor in 1968, and named associate professor of psychiatry and pharmacology in 1970.

A recipient of the Efron Award of the American College of Neuropsychopharmacology in 1975, Dr. Aghajanian received the Scheele Medal and was co-winner of the Foundations Fund Research Prize, both in 1981. He is a member of a number of professional societies including the American Society for Pharmacology and Experimental Therapeutics, the Psychiatric Research Society and the Neurochemistry Society. A fellow of the American College of Neuropsychopharmacology, he is also a member of the International Brain Research Organization.

DIRECTOR OF GRANTS AND CONTRACTS APPOINTED

Dr. Halvor G. Aaslestad has been appointed director of the Office of Grants and Contracts at the School of Medicine. An accomplished administrator with academic and scientific experience as well, Dr. Aaslestad had been chief of the Biological Sciences Review Section, Referral and Review Branch of the Division of Research Grants at the National Institutes of Health, prior to his appointment.

A graduate of Louisiana State University, Dr. Aaslestad received an M.S. degree from Pennsylvania State University and a Ph.D. degree from Louisiana State University, both in microbiology. He was a postdoctoral fellow at the U.S. Army Biological Laboratories from 1965 to 1968, when he was appointed assistant professor of microbiology at the University of Georgia. From 1973 to 1976, he was senior scientist in primate virology and special projects at the Frederick Cancer Research Institute, Frederick, Maryland.

In 1976, Dr. Aaslestad was appointed executive secretary of a Special Study Section of the National Institutes of Health, and in 1981, he was named chief of the Biological Sciences Review Section of the Scientific Review Branch of NIH, a post he held until 1984.

Dr. Aaslestad, who received the NIH Quality Increase Award in 1980, is a member of the American Society for Microbiology, Sigma Xi, and the National Council of University Research Administrators. As director of Grants and Contracts Administration at the School of Medicine, he succeeds Francis L. Crowley, who resigned in January after twelve years to assume a position in the private sector.
ASSOCIATE DEAN FOR MEDICAL EDUCATION AND STUDENT AFFAIRS IS NAMED

Dr. Robert H. Gifford, professor of medicine, has been appointed associate dean for medical education and student affairs, effective July 1, 1985. Chief of Medical Service at the West Haven Veterans Administration Medical Center, Dr. Gifford is well known as an outstanding teacher.

A graduate of Ohio Wesleyan University, Dr. Gifford received his M.D. degree cum laude from Tufts University. Prior to coming to Yale-New Haven Medical Center in 1966 as a resident in medicine, he was director of medical programs in Bogota, Columbia for three years for the Peace Corps. He was appointed assistant professor of medicine in 1969, and promoted to associate professor of clinical medicine in 1972, and professor in 1976. Active on a number of committees in the School, including the Standing Committee on the Status of Women, he organized the Clinical Correlations course for first- and second-year students.

As associate dean for student affairs, Dr. Gifford succeeds Dr. Howard Levitin, who has held that post since 1966. Dr. Levitin, who is professor of medicine, plans to continue his research in nephrology and teaching in medicine.

DIRECTOR IS APPOINTED FOR ALUMNI AFFAIRS

Dean Leon E. Rosenberg has appointed Dr. Nicholas P.R. Spinelli director of Alumni Affairs for the School of Medicine. Well known to alumni for his enthusiastic support of the school and participation in many alumni activities, Dr. Spinelli is an associate clinical professor of medicine in the Department of Internal Medicine, as well as president of the Executive Committee of the Association of Yale Alumni in Medicine.

A graduate of Yale University, where he received a B.S. degree with high honors in 1941, Dr. Spinelli received his M.D. degree cum laude from the School of Medicine in 1944. During his academic career he was elected to Phi Beta Kappa, Sigma Xi and Alpha Omega Alpha honor societies.

Following internship at Bridgeport Hospital, he served as a neuropsychiatrist in the military service from 1945 to 1947. On completion of his residency in internal medicine at the Veterans Administration Hospital in Newington, Connecticut, Dr. Spinelli entered private practice of internal medicine in Stratford. He has been senior attending physician since 1950, and director of medical education since 1960 at Bridgeport Hospital. In 1950, he was appointed clinical instructor in medicine in the School of Medicine, and was promoted to associate clinical professor in 1978.

As an alumnus of the School, Dr. Spinelli has served on the Executive Committee of the Association of Yale Alumni in Medicine since 1970, and was vice president from 1977 until his election in 1981 as president. He has also been involved in the Yale Medical School Alumni Fund, as Class of 1944 agent since 1950.

DIRECTOR APPOINTED FOR PUBLIC INFORMATION

D. Helaine Patterson has been appointed director of the Office of Public Information of the School of Medicine, effective March 18. As director, Miss Patterson will coordinate and expand the public information program of the School involving the news media and publications.

Prior to her appointment, she had been director of Medical Center Information Services at the University of Virginia Medical Center. From 1975 to 1979, she served as director of University Information Services. She began her career as a general assignment reporter, then copy editor of the Free Lance-Star in Fredericksburg, Virginia.

A graduate of Mary Washington College of the University of Virginia, Miss Patterson received an M.A. degree in public affairs journalism from American University in 1974. She is a member of the Board of Directors for Camp Holiday Trails, a national, non-profit summer camp in Charlottesville, Virginia for children with special medical needs.
At its 122nd annual meeting in April the National Academy of Sciences announced the election of 60 new members, including Dr. Leon E. Rosenberg, dean of the School and C.N.H. Long Professor of Human Genetics, and Dr. Pasko Rakic, Dorys McConnell Duberg Professor and chairman of the Section of Neuroanatomy. They were elected to the nation’s most distinguished organization of scientists and engineers in recognition of their outstanding achievements in original research.

One of the nation’s leading geneticists, Dr. Rosenberg is known for his work in clinical genetics as well as for his contributions to new knowledge in inherited metabolic disorders. He helped establish the Department of Human Genetics and was its chairman from the time of its founding in 1972 until his appointment as dean of the School in 1984.

An alumnus of the University of Wisconsin where he received both a B.A. and an M.D. degree summa cum laude, he was awarded a Guggenheim Foundation Fellowship in 1972, and the following year the American Academy of Pediatrics presented him the Borden Award for outstanding achievements in research relating to infant nutrition and development of children. In 1982, the University of Wisconsin School of Medicine awarded him its Distinguished Alumni Citation, and that same year, he was elected to the Institute of Medicine of the NAS.

Dr. Rakic is an internationally recognized leader in research on brain development. Although his research covers a broad range of developmental neurobiology, he is best known for his investigation of the development of neuronal maturation, as well as for research on the development of the visual system and cerebellum in primates. His work has important implications for studies of the interaction of genetic and environmental factors governing human behavior and intelligence, as well as for understanding human disease.

Born and educated in Yugoslavia, Dr. Rakic came to Yale in 1978 from Harvard, where he had been on the faculty since 1972. He was one of the first scientists to receive a Javits Neuroscience Award for distinguished contributions in the field of neurological and communicative disorders.

The election of Dean Rosenberg and Dr. Rakic brings to 19 the number of distinguished Yale medical faculty in the 1,453-member NAS.

The Ciba-Geigy-ILAR Rheumatism Prize, considered one of the most prestigious awards given for arthritis research, has been presented to Dr. Allen C. Steere and Dr. Stephen E. Malawista for their research on Lyme disease. The award, which is presented every four years, was presented to Drs. Steere and Malawista at the opening session of the XVIIth International Congress of Rheumatology in Sidney, Australia.

Dr. Steere is associate professor of medicine and Dr. Malawista is professor of medicine and chief of the Section of Rheumatology in the Department of Internal Medicine. Their contributions are considered unique since they not only identified Lyme disease as a specific disorder, but also demonstrated the organism responsible for it, and the vector that carries it. In addition, they alerted the medical community to effective courses of treatment. Their investigations may advance the understanding of other forms of rheumatic disease.

“Dr. Steere and Dr. Malawista must be congratulated on a truly magnificent piece of medical detective work,” noted Dr. George E. Ehrlich, vice president of development, Ciba-Geigy Pharmaceuticals. “There are few examples in modern times of a single team accomplishing so much in such an elegant way.”

Lyme disease, a complex, multi-system infection, was first identified in 1975 in Lyme, Connecticut by a team headed by Drs. Steere and Malawista. In the past few years, thousands of cases have been reported in 14 states, particularly in the northeast, midwest and California.

The award, sponsored by the Ciba-Geigy Pharmaceutical Corporation of Summit, New Jersey, and the International League Against Rheumatism, includes a prize of $27,000.
In recognition of their outstanding research contributions to the neurosciences, Dr. Charles Stevens and Dr. Gordon Shepherd have received 1985 Javits Neuroscience Investigator Awards of the NIH.

Dr. Stevens, professor of molecular neurobiology and physiology and chairman of the Section of Molecular Neurobiology, is widely recognized as one of the pioneers in the application of molecular techniques to the study of the human brain. He received a Javits Award of almost $1.3 million in support of his studies aimed at discovering how the brain’s electrical activity — nerve impulses and synaptic transmission — arises through the operation of special proteins in nerve cells called “channels”. This research should ultimately lead to a better understanding of the actions of drugs that affect the brain, such as tranquillizers and antidepressants.

Dr. Shepherd is professor of neuroscience in the Section of Neuroanatomy. The author of two acclaimed texts, Neurobiology and The Somatic Organization of the Brain, both published by Oxford University Press, he is well known for his studies on the structure and function of nervous tissue.

He received a Javits Award of almost $1.3 million in support of his research on the synaptic organization of the brain, using the vertebrate olfactory system as a model. The long-term objective of these studies is to elucidate the structure and function of local circuits within the cortical regions of the vertebrate central nervous system. The results should provide a much clearer understanding of neuronal structure-function relations within different cortical regions of the nervous system and provide insight into normal functions of microcircuits within the central nervous system, and abnormal functions related to epilepsy, schizophrenia and Alzheimer’s dementia.

Drs. Stevens and Shepherd are the seventh and eighth members of the Yale faculty to receive these special awards honoring Senator Jacob K. Javits of New York. The NIH have designated the awards for investigators submitting regular research grant applications for competitive review, who have a distinguished record of substantial contributions in some field of neurological or communicative science and who can be expected to be highly productive over the next seven years.

Research on calcium channels and their role in the function of heart cells and neurons by Dr. Richard Tsien, professor of physiology, and his colleagues has recently been recognized by two distinguished professional societies. The International Society for Heart Research has awarded Dr. Tsien its 1984/1985 Journal of Molecular and Cellular Cardiology Award for outstanding research, and The Biophysical Society presented him the 1985 Kenneth S. Cole Memorial Award.

Dr. Tsien is well known for his studies of calcium channels and their response to drugs that have important therapeutic effects on the cardiovascular system. Calcium channels are molecular pores in the cell membrane which in general, have the important role of linking electrical activity to other functions such as contraction or neurotranscretion. In the heart they are vital for the generation of the normal heart beat and can also be responsible for malfunction of the cardiovascular system, such as angina and cardiac arrhythmias.

“Understanding the mechanisms of action of calcium channels is essential to the intelligent use of existing channel blocking drugs as well as to the development of new drugs to stimulate the heart,” explained Dr. Tsien. By singling out the activity of a single calcium channel among tens of thousands in the cell membranes, Dr. Tsien and his colleagues were able to study the mechanism of action of calcium channel inhibitors and calcium channel stimulators such as epinephrine. They have presented a new explanation for how calcium channels manage to pass calcium ions rapidly, yet very selectively. In both heart cells and nerve cells, they have discovered novel types of calcium channels, different from those previously recognized.

Working with Dr. Tsien in this research were Drs. Peter Hess, Jeffry Lansman, Aaron Fox and Martha Nowicky.

The American Cancer Society has awarded grants in support of cancer research by two members of the faculty, and six fellows and research associates have received grants from the Leukemia Society of America for their research.

Dr. William N. Hait, assistant professor of medicine (medical oncology), has received $162,500 from the ACS in two-year support of his search for new effective anticancer agents. Most effective anticancer drugs act on DNA, inhibiting the cancer cell’s ability to divide and grow by interfering with DNA metabolism. Dr. Hait is adopting a different approach. He has found that an increased concentration of a substance called cyclic AMP can inhibit the growth of certain malignant tissues, and is investigating drugs that will inhibit the enzyme PDE (cyclic nucleotide phosphodiesterase) which degrades cyclic AMP. In his research, PDE will be compared in leukemic versus normal tissue and then potent inhibitors to this enzyme will be investigated.

A grant of $149,572 from the ACS will support research of Dr. John Lazo, associate professor of pharmacology, into improving the effectiveness of bleomycin, a potent antibiotic used clinically in treating some cancers, including squamous cell carcinoma and malignant lymphomas. Dr. Lazo’s research will involve testing the effectiveness of other members of the naturally occurring bleomycin family in an effort to find a variation of the substance which might improve the use of the drug.

The Leukemia Society of America has awarded two-year fellowships to: Dr. Malgorzata Jastreboff, postdoctoral fellow in pharmacology, and Dr. Kimiko Ishiguro, associate research scientist in pharmacology, for research in the development of potent anti-leukemic agents and techniques for administering and enhancing chemicals that kill malignant cells; and to Dr. Jill Lacy, a postdoctoral fellow in medical oncology, and Dr. Alan Waldman, postdoctoral fellow in therapeutic radiology, for research on the understanding of normal cellular genetic mechanisms and how changes in certain genes in a cell can lead to malignancy.

Also, to Dr. Hal Jenson, postdoctoral fellow in pediatrics and epidemiology, for his research on the process by which normal, healthy cells become malignant; and to Dr. William Brown, a postdoctoral fellow in cell biology, for his investigation of the growth characteristics and requirements of both normal and abnormal cells.

The six Yale researchers are among 45 investigators receiving the Society’s awards this year.
A CENTER FOR RADILOGIC PHYSICS ESTABLISHED AT YALE

The School of Medicine has received a $1.03 million contract from the National Cancer Institute to establish a Center for Radiological Physics (CRP). It is one of six such centers in the United States created by the NCI to ensure uniformly high quality of radiological physics services in diagnostic and therapeutic radiology at hospitals participating in projects supported by its Division of Cancer Prevention and Control.

The Yale CRP will serve as a resource for review, consultation and education to approximately 70 hospitals in the northeast, according to Dr. Robert J. Schulz, professor of radiology (radiologic physics), who is the director. Dr. Ravinder Nath, associate professor of therapeutic radiology (radiologic physics), is the associate director.

“The purpose of the CRP at Yale is to develop methods and equipment for assessing the performance of radiation equipment by on-site visits as well as by mailed dosimetry kits,” said Dr. Schulz. “The goal of these review processes is to help the participating hospitals reach and maintain a uniformly high level of health care delivery that heretofore has not been possible.”

About half of all cancer patients receive radiotherapy at some point in their treatment program. For 25 percent — almost 200,000 patients a year — radiation is the primary treatment, or is used in conjunction with other modalities in the primary treatment. Despite ongoing improvement in treatment with combined modality therapy, tumors recur in some areas of the body in approximately 100,000 patients each year.

These statistics are the basis for the NCI’s decision to establish the CRP program. “Success or failure of topical tumor control by radiotherapy can depend on the accuracy with which a prescription is fulfilled,” said Dr. Schulz. “Accurate equipment calibration, treatment planning and dosimetry are essential for the delivery of quality radiation therapy.”

Through a telecommunications network developed by Dr. Schulz and his colleagues, the dosimetry service at Yale provides radiation treatment planning for cancer patients in six hospitals in Connecticut and Massachusetts. The dosimetry training program in the Department of Therapeutic Radiology is the first, and one of only two such programs in the country. Each year, four trainees are instructed in the physics of ionizing radiations, radioactivity, radiation oncology and treatment planning before taking positions in hospitals throughout the United States.

BEAUMONT MEDICAL CLUB AWARDS FULTON PRIZE AND PRESENTS FULTON LECTURE

At its final meeting of the year the Beaumont Medical Club presented the John F. Fulton Memorial Lecture and awarded the John F. Fulton Memorial Prize. Barbara Gutman Rosenkrantz, the 1985 Fulton Fellow presented the lecture, “Minding Other People’s Business: Claims for Public Health Between the Wars.”

The Fulton Memorial Prize was presented to William Gaillard, Class of 1985, the outgoing president of the Nathan Smith Club, for his research paper “The Great Plague of Athens: Thucydides and the Bonds of Polity.” The Prize is awarded to the member of the Club whose research paper was considered the most outstanding contribution of the academic year. It was presented to Mr. Gaillard by Dr. Arthur Viseltear, associate professor of the history of medicine and public health, on behalf of the Section of the History of Medicine. “In presenting this prize, we not only honor its recipient, but perpetuate Dr. Fulton’s memory,” said Dr. Viseltear.

Barbara Gutman Rosenkrantz is professor and chairman of the Department of the History of Science at Harvard University. As the seventh Fulton Fellow of the Beaumont Medical Club, the distinguished medical historian was in residence at Yale University from May 1-3, during which time she presented three lectures, including “The Conquest of the Great White Plague” presented at the last meeting of the year of the Nathan Smith Club.

The Fulton Fellowship was founded by Dr. Bern Dibner, director of the Burndy Library, Norwalk, Connecticut to honor and perpetuate the memory of Dr. John F. Fulton. The Fellow is selected annually by a committee of the Beaumont Medical Club.

NATHAN SMITH CLUB HONORS MRS. FULTON

At the final meeting this year of the Nathan Smith Club, president William Gaillard, Class of 1985, announced the creation of the Lucia P. Fulton Fellowship to honor Mrs. Fulton “in appreciation for her ardent and enthusiastic support and unsurpassed hospitality over these many years.” Mrs. Fulton, the widow of the late Dr. John F. Fulton, has traditionally invited members of the Nathan Smith Club to hold their final meeting of the year at her home, “Millrock.”

The Nathan Smith Club is comprised of Yale medical students who meet throughout the academic year in the homes of faculty to discuss historical medical topics. Dr. Fulton served as its principal sponsor and advisor for many years.

The outstanding student in the history of science and medicine will be selected by the club’s officers to present his or her paper at the last meeting of the year as the Lucia P. Fulton Speaker, according to Mr. Gaillard.

BOOKS BY FACULTY


FACULTY NEWS

Dr. Vincent A. Andriole, professor of medicine, has been elected a member of the Council of Infectious Disease Society. There are six elected councilors of this distinguished society with a membership of over 3,000.
At its annual meeting in April, the Association of University Programs in Health Administration awarded its highest recognition to Professor John D. Thompson for his contributions to the improvement of health services through management education. Professor of public health (hospital administration) and nursing administration, he is widely recognized as the co-developer of the diagnostic related group (DRG) system. The AUPHA has established the John D. Thompson Prize for health services research to be awarded to a young faculty member any where in the world who has published the most significant original research report during the past year.

The American Urological Association presented its prestigious Hugh Hampton Young Award to Dr. Bernard Lytton, professor of surgery (urology). The award, which is co-sponsored by Bristol Laboratories and carries an honorarium of $2,000, is presented for outstanding contributions to the study of urinary tract disease.

Dr. Robert M. Donaldson, David Paige Smith Professor of Medicine, has been named a Master of the American College of Physicians. A leading medical educator and investigator in gastroenterology, Dr. Donaldson's contributions to internal medicine include research on cobalamin transport and the blind loop syndrome.

The New Haven Foundation presented one of its eight 1984 Elm and Ivy Awards to Dr. James P. Comer for outstanding contributions toward improved relations between New Haven and Yale University. Dr. Comer, who is Maurice Falk Professor of Child Psychiatry and associate dean for students at the School of Medicine, was cited for his leadership in a major collaboration between the Yale Child Study Center and the New Haven public school system to help solve the problems of inner-city school education, especially in the elementary schools.

In addition, the American Psychiatric Association presented its Agnes Purcell McGavin Award to Dr. Comer for his outstanding work related to the preventive aspects of the emotional disorders of childhood.

Dr. James F. Jekel, C.E.—A. Winslow Professor of Public Health, has received a 1985-86 Fulbright Fellowship to assist the people of the Bahamas in the development of an epidemiological surveillance system to monitor the island's drug and teenage pregnancy problems. Selected by the U.S. Information Agency and the Board of Foreign Scholarships, Dr. Jekel will help promote mutual understanding between the people of the U.S. and the Bahamas.

In addition to receiving a Javits Award, Dr. Charles Stevens was one of ten recipients of the McKnight Awards for Research Projects. The award for $150,000 for a three-year period is in support of his research on "Neuromodulatory Mechanisms of Information Storage." The McKnight Awards support outstanding investigative programs by established neuroscientists and their associates to encourage them to direct more of their efforts toward developing new approaches to the understanding of memory and related diseases.

Dr. Arthur Horwich is one of twelve physicians selected from a group of 86 highly qualified applicants to receive a Hartford Fellowship from The John A. Hartford Foundation, Inc. of New York, which provides annual salary support of $35,000 for three years. An assistant professor of human genetics and pediatrics who has focused his research on inborn errors of metabolism, Dr. Horwich received the Life and Health Insurance Medical Research Fund Award last year for his studies of the Expression of cDNA Encoding Human Ornithine Transcarbamylase.

The Alzheimer's Disease and Related Disorders Association, Inc. has presented Dr. Amy F.T. Arnsten a 1985 Allied Corporation/ADRDA Faculty Scholar Award. The award of $38,000 annually for three years is intended to support faculty at the junior level who have demonstrated an ability for independent and innovative research in the causes or treatment of Alzheimer's disease and related disorders. Dr. Arnsten is an associate research scientist in the Section of Neuroanatomy.

The Japan Society of Anesthesiology has made Dr. Nicholas M. Greene and Dr. Luke M. Kitahata honorary members in recognition of their many contributions to research in the field. Drs. Greene and Kitahata are professors and former chairmen of the Department of Anesthesiology. In addition, Dr. Greene has been awarded an honorary degree and appointed a Fellow of the Faculty of Anesthetists, Royal College of Surgeons, England.

Dr. William Cain, professor of epidemiology (environmental health) and psychology, has been voted president-elect of the New York Academy of Sciences. Dr. Cain, who is also a fellow of the John B. Pierce Foundation Laboratory, is well known for his studies of the olfactory system and for his research on the effects of indoor air pollution on the sensory system. The New York Academy of Sciences is an international membership organization of 50,000 scientists from the United States and 81 foreign nations, representing every scientific discipline.

Dr. Sara Rockwell, professor of research in therapeutic radiology, has been elected a Councilor-at-large of the Radiation Research Society. The society is the major international society for research in radiation and its effects.

On May 23, Dr. Myrna M. Weissman, professor of psychiatry and epidemiology and director of the Depression Research Unit, presented the Distinguished Psychiatric Lecture at the American Psychiatric Association's annual meeting in Dallas. The title of her lecture was "Does Psychiatric Epidemiology Count for the Clinician?"

Dr. Paul G. Barash, professor and chairman of the Department of Anesthesiology, has been elected to a two-year term as president of the Society of Cardiovascular Anesthesiologists, a national organization promoting research and clinical development in cardiovascular and thoracic anesthesiology.

Dr. Norman Talner, professor of pediatrics and diagnostic radiology, served on the organizing committee for the 2nd World Congress of Pediatric Cardiology, held in New York City, June 2-6. Several other Yale medical faculty gave invited presentations including Drs. George Lister, associate professor of pediatrics and anesthesiology; Charles Kleiman, associate professor of pediatrics and anesthesiology; William Hellenbrand, associate professor of pediatrics; Ruth Whittemore, clinical professor of pediatrics; William W.L. Glenn, Charles W. Ohse Professor of Surgery (cardiothoracic); and Gary Kopf, assistant professor of surgery (cardiothoracic). In addition, Drs. Michelle Moss and John Fahy, postdoctoral fellows and instructors in pediatrics, and Patricia A. Richard, nurse clinical instructor in pediatric cardiology, presented papers at the session.
MR. KAPLAN IS HONORED

Over 100 friends and family gathered on March 31 in the Hope Building to honor Louis J. Kaplan on his retirement as Associate Dean for Community and Government Relations and Alumni Affairs. Guests included not only members of the Yale and Medical Center communities, but representatives of the local and state governments as well. Several who could not attend, including former deans Fredrick Redlich and Lewis Thomas sent messages of congratulations and best wishes.

Lou Kaplan came to Yale in 1967 as assistant to Dean Redlich for community affairs and government relations. In 1974, he became Assistant Dean for Community and Government Relations and Alumni Affairs; and in 1979, he was appointed Associate Dean. He was also a lecturer in epidemiology and public health and psychiatry.

During his 18 years at Yale, he retained membership on boards of many city, community and Yale affiliated organizations. He was Communicator Lobbyist for the State of Connecticut as well as a key source and advisor for local, state and federal officials.

Alumni of the School of Medicine perhaps know Mr. Kaplan best for his participation in many alumni activities including the Yale Medical School Alumni Fund, the Association of Yale Alumni in Medicine, and the Association of Yale Alumni Graduate and Professional School Committee.

One colleague expressed the opinion of many when she said, “Lou’s talents and expertise will be sorely missed by his Yale family and friends.”

CLASS NOTES

1932
Conrad Lam wrote on February 1 that he was leaving the following week to participate in a World Congress on Open Heart Surgery in Bombay, India. The Congress was being held to commemorate 25 years of open heart surgery in that country.

1934
Edward T. O’Donnell was honored on November 6, 1984 by the Medical Society of Delaware on the 50th anniversary of his practice of pediatrics. In addition, the Wilmington Friends School honored Dr. O’Donnell with a reception marking his retirement after 20 years as school physician.

1939
Douglass Walker has given Yale’s Trumbull College a set of Wedgewood china depicting various Yale scenes. The china belonged to Dr. Stanhope Bayne-Jones, who was master of the college from 1932 to 1938 and who served as dean of the School of Medicine from 1935 to 1940.

As a medical student and also a proctor in one of the Howard Avenue dormitories, Douglass Walker came to know Dean Bayne-Jones quite well. Subsequently, as an Army medical officer in World War II, he worked with B.J. (a colonel and later a brigadier general) in the Surgeon General’s office. While Dr. Walker was on the faculty at the Johns Hopkins School of Medicine (1963-1970), he renewed his friendship with B.J., who had retired and was living in Washington where he was writing a history of preventive medicine in World War II. In 1970, when B.J. died, Mrs. Bayne-Jones gave the set of china to the Walkers. Through their thoughtful generosity, the china has now returned to Trumbull College.

1941
A foundation to promote and support medical research, education and patient care has been named in honor of John Franklin of Norfolk, Virginia. The John Franklin Medical Foundation was dedicated on January 12. A plaque installed in the lobby of the foundation building reads in part, “Dr. Franklin has devoted his professional life to excellence in the practice of medicine and his personal life to the care and well-being of his patients, his family, his colleagues, and his community. He is held in the highest esteem both as a man and as a physician by all who have been privileged to know him.”

A tribute to Dr. Franklin written by Willys Monroe, entitled “Salute to a Life of Excellence” was published in the May 1985 issue of Virginia Medical. He reports as follows in the final paragraph of that article:

“A few weeks after the dedication ceremony, Jack underwent a quadruple coronary artery bypass. While he came through the procedure with flying colors, he tells me that the enforced rest period postoperatively was so pleasant that he decided to retire from the practice of medicine on May 1. His presence on the medical scene will be sorely missed, but we wish him and Frannie much happiness, contentment and many more productive years among their children, grandchildren and a host of friends.”

1949
Martha Vaughan, Chief of the Laboratory of Cellular Metabolism at the National Heart, Lung and Blood Institute, has been elected a member of the National Academy of Sciences, the nation’s most distinguished organization of scientists. She was one of sixty scientists to be so honored this year.

1953
William Whalen of Willimantic was installed as the 148th president of the Connecticut State Medical Society at the annual meeting in May. Since 1959 he has been staff surgeon and from 1982 to 1984, chief of staff, at Windham Community Memorial Hospital. In 1983 Dr. Whalen, an associate clinical professor of surgery at Yale, received the Edward B. Storer Award for Excellence in Surgical Teaching, which was presented by the chief residents of Yale’s Department of Surgery.
1955
The American College of Physicians (ACP) has announced that James P. Nolan has assumed office as a Governor of the 60,000-member national medical specialty society. Elected locally, Dr. Nolan will hold his post as the ACP Governor of Upstate New York for four years. A specialist in internal medicine, he is professor and chairman of the Department of Medicine at the State University of New York at Buffalo.

1962
Norman Bass, professor and chairman of the Department of Neurology at the University of Kentucky College of Medicine, has been named dean of the Medical College of Georgia School of Medicine.

1973
Jerry Nagler, recently elected to fellowship in the American College of Physicians, was honored in March during the convocation ceremony at the College's Annual Session in Washington, D.C. Dr. Nagler, who specializes in internal medicine and gastroenterology, has been a resident of New York City for twelve years and is on the staff of New York Hospital - Cornell Medical Center and Cornell University Medical College.

1977
John White of Bethesda, Maryland has been elected to fellowship in the American College of Physicians. He received this honor in March, at the College's Convocation ceremony at its Annual Session in Washington, D.C. Dr. White, a specialist in internal medicine and emergency medicine, is a resident of Bethesda and is on the staff of the Georgetown University Medical Center.

Christine K. Carrico has been appointed director of the Pharmacological Sciences Program of the National Institute of General Medical Sciences (NIGMS), one of the National Institutes of Health. As director, she will provide leadership in the administration of a large program of research and research training grants in the pharmacological sciences, biochemistry, and anesthesiology. Dr. Carrico will also direct the Pharmacology Research Associate Program.

1983
The American Academy of Family Physicians (AAFP) presented a $1,500 award to Patricia Kellner in support of her graduate training in family practice. Dr. Kellner, who is a family practice resident at Case Western Reserve University, Cleveland, is one of twenty selected from 170 candidates on the basis of scholastic achievement, leadership qualities and qualifications for, and interest in family practice.

1984
Martin Yarmush is one of two biomedical scientists at Massachusetts Institute of Technology who have been selected as recipients of the first Markey Scholar Awards by the Lucille P. Markey Charitable Trust. The awards, which have been made to sixteen outstanding young researchers, will provide from $500,000 to $700,000 support to each recipient over six to eight years.

Dr. Yarmush, who received his Ph.D. in immunology/biochemistry from The Rockefeller University in 1979, is a principal research associate in the Department of Chemical Engineering at MIT. His work involves experimental and theoretical studies in applied immunology and biochemical and biomedical engineering. Among his specific interests are immunological approaches to treatment of cancer and other chronic diseases, immunoadsorption for large-scale biomolecule purification, and development of an artificial pancreas and liver.

HOUSE STAFF
1975
Richard Uauy wrote recently that as of March 1, he was to leave his position as head of the Clinical Nutrition Unit at the University of Chile to become associate professor of pediatrics at the University of Texas in Dallas for a three-year period. He noted that the chairman of this department is Dr. Joseph Warshaw, who he trained with in neonatology at Yale.

PHYSICIAN ASSOCIATE PROGRAM
1976
Andrew Scala writes that he received an appointment with the Dartmouth-Hitchcock Clinic in New Hampshire, as of December 1. He is associated with the Department of Internal Medicine, although he is concentrating on orthopaedic problems.

IN MEMORIAM
Joseph Epstein
February 3, 1985
M.D.'23
Henry W. Ferris
January 19, 1985
M.D.'25
Tzu Pei Chou
December 6, 1984
M.D.'25
Robert B. Love
November 19, 1984
M.D.'26
Herman H. Goldstein
September 30, 1983
M.D.'27
Berthold R. Comeau
February 14, 1985
M.D.'28
Uno H. Helgeson
October 28, 1978
M.D.'28
Courtney C. Bishop
January 17, 1985
M.D.'30
Frank H. Couch
January 17, 1985
M.D.'30
Morris Y. Krohn
February 24, 1985
M.D.'32
Gideon K. deForest
March 11, 1985
M.D.'34
Michael L. Furcolow
January 20, 1985
M.D.'34
Leo P. Rosenthal
August 4, 1984
exp.H.'37
Richard J. Hinchey
April 1, 1978
M.P.H.'40
Charles R. Harms
March 3, 1985
M.D.'42
James L. Bradley
February 1, 1985
M.D.'43
Helen B. Ausley
November 13, 1982
M.P.H.'45
Lorraine C. Patterson
July 2, 1974
M.P.H.'49
Albert L. Stone
October 20, 1984
M.D.'53
Merrill A. Baratz
December 26, 1984
HS'54
Edwin D. Harrington
September 20, 1973
M.P.H.'54
William C. Edwards
October 28, 1983
M.D.'59
Karlen L. Paulay
October 28, 1983
M.D.'62
William B. Yeagley
January 3, 1985
M.D.'66
Joseph H. Zelson
December 23, 1984
HS'69
Thomas W. Jones
December 20, 1977
M.P.H.'71
Stephen R. Shell
February 14, 1985
HS'80
CLASS OF 1985

RESIDENCY POSITIONS

   CALIFORNIA
   Harbor-UCLA Medical Center, Torrance
   Lisa Nelson-Robinson, Transitional
   Santa Monica Hospital
   Michael Gilbert, Family Practice
   UCLA Neuropsychiatric Institute
   Thomas Newton, Psychiatry
   University of California San Diego Affiliated Hospitals
   Jaime Arroyo, Internal Medicine
   Peter Rubin, Surgery
   Javier Vizosos, Obstetrics and Gynecology
   University of California (Irvine) Affiliated Hospitals
   Alice Chi, Internal Medicine
   University of California, San Francisco
   Sandra Wolin, Postdoctoral Fellow, Department of Biochemistry and Biophysics
   University of California Hospitals
   San Francisco
   Brent Moelleken, General Surgery
   Jon Nakamoto, Pediatrics
   Eric Poeschla, Internal Medicine
   Fong Wang, Pediatrics

   COLORADO
   University of Colorado Affiliated Hospitals, Denver
   Barry Bergquist, Internal Medicine
   Michael Johnson, Psychiatry
   Elizabeth Mason, Obstetrics and Gynecology
   Lesley Pennypacker, Internal Medicine

   CONNECTICUT
   Hartford Hospital
   Robert Smith, Transitional
   Hospital of St. Raphael, New Haven
   Ellen Rieur, Internal Medicine
   Norwalk Hospital
   Kimball Woodward, Internal Medicine
   Yale-New Haven Hospital
   David Birnkrant, Pediatrics
   Vance Brown, Internal Medicine
   JoAnne Burger, Pediatrics
   Jane Carter, Internal Medicine
   Jacqueline Gutmann, Obstetrics and Gynecology
   Susan Korrick, Internal Medicine
   Jonathan Lewin, Pediatrics
   Susan Moore, Internal Medicine
   Jeffrey Morton, Therapeutic Radiology
   David Roberts, Internal Medicine
   Richard Ruiz, Surgery
   Reginald Sanders, Internal Medicine
   Mark Topazian, Internal Medicine
   Pablo Vazquez-Scorne, Surgery

   DISTRICT OF COLUMBIA
   Children's Hospital
   Fred Santoro, Pediatrics
   George Washington University Hospital
   Shirley Lee, Internal Medicine
   Walter Reed Army Hospital
   Jennifer Calagan, Internal Medicine

   ILLINOIS
   McGaw Medical Center-Northwestern
   University, Chicago
   Edward Tayu, General Surgery
   University of Chicago Clinics
   Greg Sachs, Internal Medicine

   MARYLAND
   Johns Hopkins Hospital, Baltimore
   Peter Greene, General Surgery
   John Roberts, General Surgery

   MASSACHUSETTS
   Beth Israel Hospital, Boston
   Terri Cornelison, Obstetrics and Gynecology
   Virginia Huang, General Surgery
   Boston City Hospital
   Carol Farver, Internal Medicine
   Samuel Goos, Internal Medicine
   Angela Grant, Internal Medicine
   Robert Needelman, Pediatrics
   Brigham and Women's Hospital, Boston
   Hingge Hsu, Internal Medicine
   John Merendino, Internal Medicine
   Colin Smickle, Obstetrics and Gynecology
   Steven Warren, Surgery
   Cambridge Hospital
   Janice Blustein, Primary Care Medicine
   Joshua Sparrow, Transitional
   Eye Research Institute Retina Foundation, Boston
   Tina Tillis, Research Fellow, Ophthalmology
   Lemuel Shattuck Hospital, Boston
   Marie Hobart, Transitional
   Massachusetts General Hospital, Boston
   Richard Garber, Pediatrics
   Ted Love, Internal Medicine
   Joshua Schor, Internal Medicine
   McLean Hospital, Belmont
   Alec Bodkin, Internal Medicine
   New England Deaconess Hospital, Boston
   Jeffrey Lowell, General Surgery
   New England Medical Center Hospital, Boston
   Brian Annex, Internal Medicine
   Anthony Marks, Internal Medicine

   MICHIGAN
   University of Michigan Affiliated Hospitals, Ann Arbor
   Janet Young, Diagnostic Radiology

   MINNESOTA
   University of Minnesota Hospital, Minneapolis
   Calixto Dimas, Diagnostic Radiology
   Richard Parker, Neurosurgery

   NEW YORK
   Maimonides Medical Center, Brooklyn
   Paul Roberts, Internal Medicine
   Millard Fillmore Hospital, Buffalo
   Barbara Guillette, Surgery
   Montefiore Hospital, Bronx
   Daniel Greenwald, General Surgery
   Mt. Sinai Hospital, New York
   Stafford Broumand, General Surgery
   Julie Danaher, Obstetrics and Gynecology
   Darlyne Johnson, Surgery
   Maria Rivera, Internal Medicine
   New York University Medical Center, New York
   Peter Chang Sing, Internal Medicine

   Presbyterian Hospital, New York
   Gail Mattson, General Surgery
   Roosevelt Hospital, New York
   Michael Behrman, General Surgery
   Strong Memorial Hospital, Rochester
   Lynn Mehlin, Internal Medicine
   State University of New York-Erie County Medical Center, Buffalo
   Timothy Tanner, Internal Medicine/Pediatric Medicine
   The New York Hospital, New York
   Sara Cartmell, Obstetrics and Gynecology
   Robert Kiltzman, Psychiatry
   Marnin Merrick, Internal Medicine
   Anne Regenstein, Obstetrics and Gynecology

   NORTH CAROLINA
   Duke University Medical Center, Durham
   Bryan DeSouza, Neurosurgery
   Victor Hsu, Internal Medicine

   PENNSYLVANIA
   Children's Hospital, Philadelphia
   Sara Schutzman, Pediatrics
   Louis Tesoro, Pediatrics
   Graduate Hospital, Philadelphia
   Samuel Pesin, Internal Medicine
   Hospital of the University of Pennsylvania, Philadelphia
   Edward Savage, General Surgery
   Mark Shachter, General Surgery
   Timothy Shapiro, Internal Medicine
   Hospitals of the University Health Center of Pittsburgh
   William Giannell, Pediatrics
   Robert Higgins, General Surgery
   Medical College of Pennsylvania, Philadelphia
   Ronald Lisan, Internal Medicine
   Pennsylvania Hospital, Philadelphia
   Robert Aronowitz, Internal Medicine
   Jane Mathiesen, Obstetrics and Gynecology
   Temple University Hospital, Philadelphia
   Stuart Isaacs, Internal Medicine
   Thomas Jefferson University Hospital, Philadelphia
   Guy Fried, Internal Medicine

   RHODE ISLAND
   Women and Infants Hospital, Providence
   Elizabeth Moy, Obstetrics and Gynecology

   TEXAS
   Baylor University Medical Center, Dallas
   Peter Shile, Internal Medicine
   University of Texas Southwestern Affiliated Hospitals, Dallas
   Kathleen Maurer, Internal Medicine

   CANADA
   Royal Victoria Hospital, Montreal
   David Alwin, Internal Medicine
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