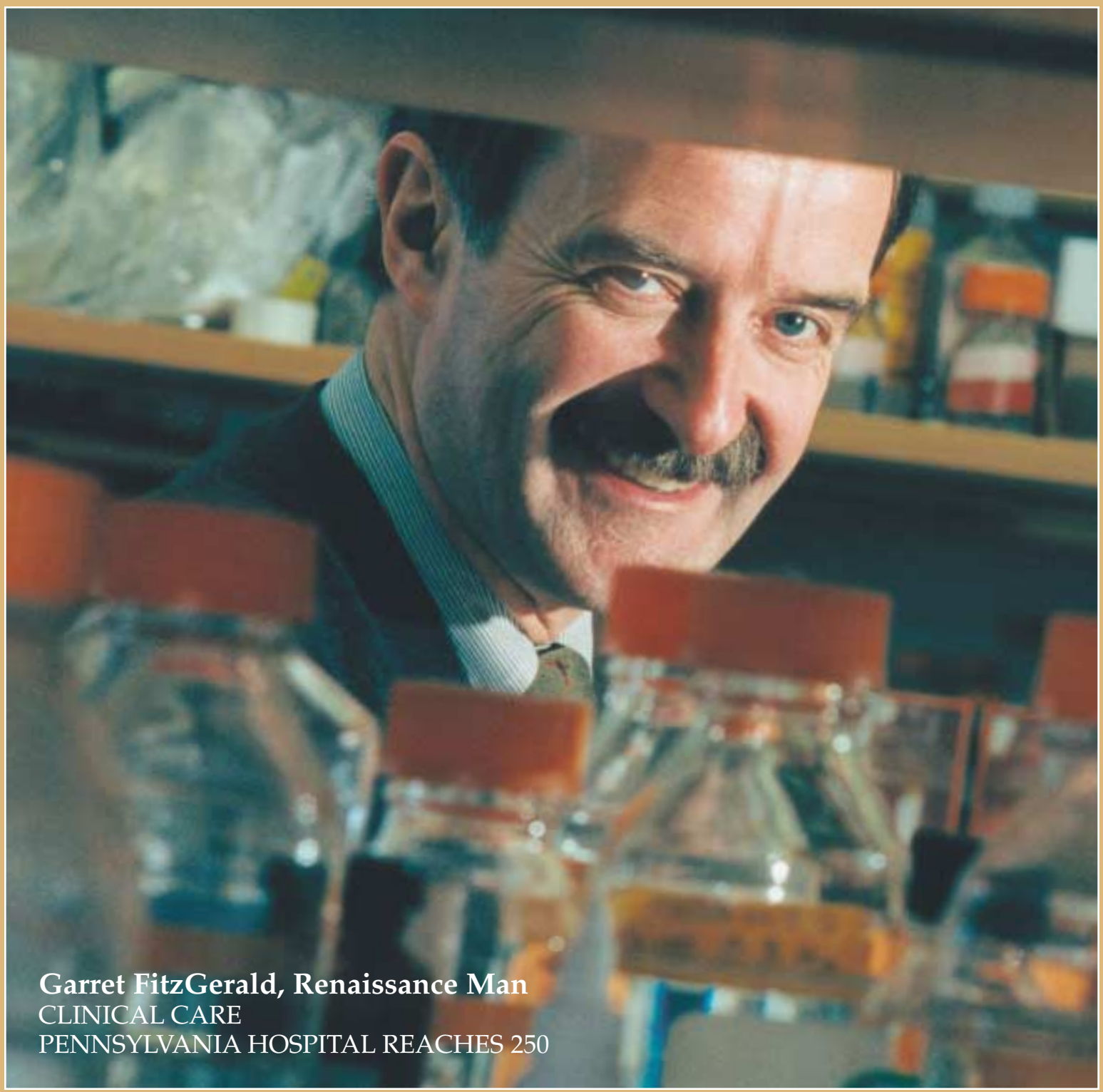
PENN MEDICINE

UNIVERSITY OF PENNSYLVANIA MEDICAL CENTER ■ SPRING 2001



Garret FitzGerald, Renaissance Man

CLINICAL CARE

PENNSYLVANIA HOSPITAL REACHES 250

Then and Now

In the May 1949 issue of *U.M.A. News*, published by Penn's Undergraduate Medical Association, an article reported that a newly established "medical mission in the center of Philadelphia is providing care and thoughtful treatment" to the needy. The providers were some 15 to 20 medical students. "Students from all classes in the University Medical School have given their time on Sunday afternoons and evenings, as have several practicing physicians in the area, and the work has been in progress for several weeks."

At the Central Gospel Hall Mission, at 222 North 12th Street, the medical students might typically examine 20 to 30 patients. As the *U.M.A. News* put it, "Histories, physicals, and diagnoses are made. The directing physician is consulted. If the case requires minor treatment, such is undertaken. If the patient requires hospital attention, he is sent to a hospital with a note."

One of the medical students who helped start the medical mission is H. Newton Spencer, M.D. '50, G.M.E. '58, who has written an account of its planning and development. In this issue of *Penn Medicine*, Marie Gehret describes the activities of several current Penn medical students who are running two clinics in West Philadelphia. It is interesting to compare the two student initiatives some 50 years apart. The chief similarity, as one might expect, is the call to service felt by the young men and women in 1949 and 2001. Both groups were seeking to help other people while gaining experience that would help them hone their skills as caregivers. One of the apparent differences, however, is the strong religious impetus of those students of 1949. Although both clinics run by today's Penn students are housed in West Philadelphia churches, the rest of the initiative seems largely secular. On the other hand, the student founders of the clinics — or medical missions — in 1949 were members of the Christian Medical Society at Penn.

In the Spring of 1948, Spencer was a second-year medical student when he visited a Sunday evening religious service at the Central Gospel Hall Mission. Seeing the 750 homeless men made "an everlasting impression" on him. "All I could remember was a sea of faces and people coughing and groaning," he says today. Spencer discussed the situation with David W. Baker, also a second-year medical student at Penn — and an ordained Presbyterian minister. They soon developed the idea of establishing clinics for the homeless, at Central Gospel Hall Mission and at the 8th Street Wayside Mission. Both sites underwent extensive cleaning and remodeling. According to Spencer, the Graduate Hospital donated the bulk of the equipment, including two low beds; two examination tables; and two electric sterilizers. Its chief of surgery, Dr. William Bates, also donated several medical instruments. Many others contributed.

Getting approval from the various organizations, including the county medical society, took some doing. For legal reasons, the term "counseling service" was used instead of "clinic." Spencer notes the help of Dr. Elizabeth Ravdin, the wife of Dr. I. S. Ravdin, the chief of surgery. He had taken the submitted plan home to read, but it was she who read it first — and urged her husband to support it at the next faculty meeting. Dr. John M. Mitchell, then dean of the medical school, at first discouraged the concept of a student-run clinic because he was afraid it would not survive more than a year. Although the medical counseling service was discontinued for the summer months, it returned the next semester and, says Spencer, continued for many years thereafter, "until Medicare was implemented in 1968."

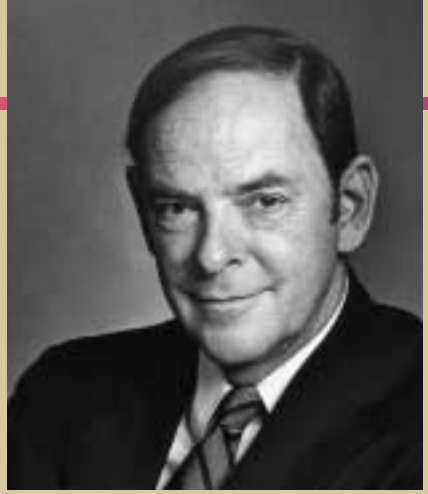
Spencer asked Dr. Kenneth Scott, a Penn graduate, to be the licensed physician on duty. From church, Spencer knew Scott's parents, who had been missionaries in China. What experience did Spencer himself have as a volunteer? "None whatsoever," he says. He explains that David Baker "wanted me to be a preacher," but Spencer preferred to help other people through medicine. In March of 1949, the two mission clinics opened. There were only two patients that first evening, Spencer recalls, but the numbers increased steadily to about 30 per evening. In addition to Baker and Spencer, other medical students who attended the very first sessions included Margaret (Peggy) Potter and William J. Erdman, as well as Robert Carpenter, a medical student at Temple University. Elizabeth Flynn, a medical technician at the University hospital, served as registrar and secretary.

From the start, the clinics did not lack for help. "There were more students who wanted to volunteer than we had places for," says Spencer. Originally, participation in the clinics was limited to members of the Christian Medical Society, but that decision was soon changed. Among the people who joined the society around this time was C. Everett Koop, M.D., G.M.E. '47, then assistant professor of surgery at Penn and surgeon-in-chief at The Children's Hospital of Philadelphia. Koop succeeded Scott as graduate director of the mission clinics.

Today, Spencer, of Ardmore, Pa., has retired from orthopaedic surgery but remains an instructor, as well as a consultant on occupational health. During his career, he continued some of the work he began with the student clinic. While serving in the Air Force in Korea (1953-54), for example, he helped rebuild and restock bombed-out hospitals. He also used to travel regularly to Haiti, to perform surgery on children at the Albert Schweitzer Hospital. Earlier this year, Spencer was delighted to hear about President Bush's creation of an Office of Faith-Based and Community Initiatives. In Spencer's experience, those initiatives can work.

Cover: Garret A. FitzGerald, M.D.
Photograph by Tommy Leonardi.

Contexts, Challenges, and Change



As you can read elsewhere in this issue, on February 16, President Judith Rodin, Ph.D., announced the recommendations of a special committee of University trustees and members of our medical faculty that had been charged with examining the status of the University of Pennsylvania Health System. The most significant change recommended by the committee was the formation of a new not-for-profit entity that would comprise the health-services components of the Health System. A few weeks before that, however, the Medical Faculty Senate sponsored a faculty symposium to present perspectives on academic medical centers and the marketplace. Although the focus of the symposium was national, the general trends apply to Penn as well. The high attendance at this event demonstrated beyond all doubt that our faculty members care very much how and where they do their work.

My chief role at the symposium was to provide the context for the strategic planning at Penn. That context, I believe, explains why the special committee made the recommendations it did. For a start, strategic planning at Penn has been going on continuously for many years, occasionally leading to major changes. For example, in 1986, the University trustees formed the Medical Center and created the CEO/Dean position, putting the Hospital of the University of Pennsylvania and the School of Medicine under the same administrative leadership. Edward J. Stemmler, M.D. '60, was the first to serve in the role of CEO/Dean. I was the second, but in an interim capacity. Before that time, HUP reported directly but separately to a Vice President for Health Affairs in the University, and the four health-related schools, including Medicine, also reported directly but as separate entities to the same Vice President for Health Affairs.

Over the first few years after William N. Kelley, M.D., arrived as the next CEO/Dean, a number of strategic changes were made. These included forming the Health System; creating its own board of trustees and executive committee; pursuing vertical integration of the Health System; establishing an "inner ring/outer ring" policy; and acquiring physician practices and hospitals.

There were two major reasons for our fiscal difficulties that resulted in our unprecedented $350 million operating deficit for the three years 1997-1999: the changing reimbursement climate nationally and here in the Delaware Valley, and the failure of the anticipated full-risk scenario to evolve. Yet the subsequent turnaround in FY 2000 was equally dramatic: UPHS went from a $200 million operating loss in FY 1999 to a $30 million operating loss in FY 2000, and that was fairly close to budget. For the first six months of FY2001, the Health System is approximately $18.5 million ahead of budget and $20 million in the black. Our improved operating performance is real and reflects extraordinary efforts by everyone: the faculty in clinical departments, their chairs, all the staff, and the health-services administration led by Robert D. Martin, Ph.D.

Although the operating performance has been praiseworthy, the balance sheet and the capital needs of the health-services component present a large and ever-present dilemma. The Health System's margin is small in relation to its annual budget of more than $1.6 billion. Capital spending last year and this year has been relatively spare, and more capital spending than the current level will be needed in the future both for replacement and renewal and for new technology. In addition, the liabilities of the Health System include some $800 million in long-term debt. In total, liabilities comprise a substantial fraction of the assets – that is, $1.4 billion in liabilities and $1.8 billion dollars in assets. Our flexibility is further compromised because our cash and investments dwindled over the years 1997 through 1999 to a low level for a health system of our size.

We must particularly keep in mind the care and feeding of the academic programs. In recent years, very large transfers were made from the health-services component to the School of Medicine, sometimes at the level of $100 million per year. Much of this funding was used for building projects, specifically, the Stellar-Chance Laboratories and Biomedical Research Building II/III. This spending is obviously no longer possible in the current climate, or even necessary, but a significant transfer of dollars from the health-services component to the School of Medicine on an annual and predictable basis is necessary to meet the requirements for annual reinvestment in the academic enterprise. These investments include recruitment of new chairs, new faculty, renovation of academic facilities, planned maintenance, and honoring prior commitments. In FY 2000, the School managed to close its budget but only through strenuous efforts. This year, the School is staying on budget with help, but our circumstances are still constrained.

Looking to the future, we see a need for additional reinvestment and renewal sources for the School of Medicine in additional amounts between $20 million and $30 million per year. The School will look again to the health-services component for a significant part of these financial flows, but it must also look to itself, to its own development efforts, to other new sources of revenue, and to new efficiencies with which to reduce expenses.

These are the challenges we face. Tough choices will have to be made, but I see no reason for doom and gloom. Our educational programs are excellent. The intellectual climate in the School and the quality of our faculty and students are at an all-time high. Change is ever present, and adapting to change continuously is the means by which we preserve – and augment – our academic missions.

Arthur K. Asbury, M.D.
Interim Dean, School of Medicine

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A new "direction" for the Health System

On February 16, Judith Rodin, Ph.D., president of the University of Pennsylvania, could count on a very attentive built-in audience when she announced the recommendations of a special committee that had been considering the future of Penn's Health System. In fact, an observer might have detected a palpable tension throughout UPHS in the days just preceding Rodin's announcement. Two months earlier, in an e-mail memo to interested parties, Rodin had acknowledged the Health System was "well on the road to financial recovery," but she also noted that it "carries a very sizable debt burden, a majority of which is connected to HUP." The message coming from University and UPHS administrators had been, as one spokesperson put it, that "simply preserving the status quo is not an option." That was why Rodin had charged the special committee of University trustees and senior medical faculty "to consider options for the future of the health system."

One of the options that had been rumored was outright sale of some or all of the four UPHS hospitals and the physician practices in Penn's primary-care network. In reporting the recommendations made by the committee on February 16, however, Rodin made clear that the University trustees "have reached a decision not to sell any of the hospitals in the Health System." She also announced that the University would establish a new, not-for-profit entity (501C3) for the Health System, wholly owned by the University but with its own CEO and governing board.

For months, rumors about the fate of UPHS had come and gone and sometimes come again. In her mid-December e-mail message, Rodin felt compelled to deny a rumor that the University trustees were about to "sell UPHS hospitals to a for-profit health-care organization." *The Philadelphia Inquirer* and the *Philadelphia Business Journal* closely followed the progress of the special committee, reminded readers of the Health System's $400 million operating losses in the previous four fiscal years, and set forth various hypothetical scenarios. In its issue of February 14, the *Inquirer*'s coverage began: "By Friday, the dismantling of the University of Pennsylvania Health System – a network of four hospitals, several walk-in treatment centers, and hundreds of doctors' practices assembled over the past decade – could begin." For its part, *The Daily Pennsylvanian*, the independent undergraduate newspaper, speculated about various potential buyers, including The Children's Hospital of Philadelphia. In one of its editorials about the Health System's financial troubles, the newspaper's board likened the situation to "a long, agonizing soap opera."

In late January, another group with a particularly strong interest in the future of the Health System, the medical faculty, organized a symposium on the current health-care market and the challenges faced by academic medical centers. Among the speakers was Arthur K. Asbury, M.D., interim dean of the School of Medicine, who took the opportunity to establish a financial context and report on strategic planning over the last decade and a half. (See "The Last Word," inside back cover.) Other topics included the effects of the sale of an academic medical center to a not-for-profit or to a for-profit organization. From the questions and comments made by members of the faculty, it seemed clear that they found the potential sale of the Health System – particularly to a for-profit entity – unpalatable. Then, just a week before Rodin made her announcements, Asbury and Robert D. Martin, Ph.D., interim CEO of the Health System, released a message acknowledging "the uncertainty of the past few months" and assuring UPHS faculty and staff that, despite increasing rumors to the contrary, the committee had not made its recommendations. So it was not surprising that Rodin's announcement on February 16 was closely attended, whether in the room where the trustees were meeting or throughout the campus afterward.

Given the circumstances, then, the special committee's recommended "direction" for UPHS may have seemed slightly anticlimactic. In some ways, the status quo was reaffirmed – the University, Rodin announced, "is committed to maintaining an integrated health system." As she put it, although the special committee "has been mindful of the financial imperatives, our first priority has been to sustain and enhance the University's academic and research missions; continue to be a first-rate academic medical center on the cutting edge of education, research, and patient care; and maintain the School of Medicine's standing as one of the top medical schools in the country." Perhaps the chief difference is the creation of the new entity, which Rodin said could take a year or longer to set up. The School of Medicine would remain with the University, as would the faculty practices, known as CPUP. Although it was too early to give specifics, Rodin told a group a campus reporters that "we intend to bridge across" the medical school and the health-services component.

Although UPHS currently has its own CEO and its own governing board, the new 501C3 is expected to be more flexible in the "challenging" marketplace. At present, Rodin said, UPHS needs four budget approvals, which limits how "nimble" and swift it can be in making decisions and acting on them. Indeed, as Rodin explained, she expects the new entity to be "more aggressive" and more open to "potential alliances with strategic partners who share our academic vision." Among the examples is the joint development of the former site of Philadelphia's Civic Center by Penn and CHOP as well

as a recent strategic alliance with Siemens Medical Systems, Inc., a manufacturer of medical diagnostic tools, that is designed to save UPHS as much as $16 million over eight years and set the stage for innovative and cooperative research.

In the short run, Rodin acknowledged, the new entity would not insulate the University from the heavy debt burden accrued by the Health System; but she expects the new entity to earn better operating margins over time and eventually to be able to restructure its debt. Rodin also mentioned that the financial turnaround made by UPHS over the last year — including an operating profit of $18.5 million for the first half of FY2001 — had made it more attractive to organizations looking to acquire or form partnerships. "The number of interested parties now is very different than it would have been in June of '99," said Rodin. "The cost-cutting measures, the revenue-generating measures, the performance of the Health System clearly made it attractive — and it's attractive to *us*, too."

Part of the new direction of the Health System includes a restructuring of leadership as well. Instead of seeking a single person to hold the joint position of dean of the medical school and CEO of the Health System, the University is now conducting a national search for a dean/executive vice president; the CEO of the new entity would have dotted-line reporting to the dean/EVP. A potential split in leadership of this kind was vociferously opposed by the medical faculty in a meeting last spring. This year, Rodin pointed out, the faculty was brought into the deliberative process. In addition, she said, after several months with Asbury and Martin in the two interim roles, "we've had the experience of a split." She likened it to "an *in vivo* experiment." As Rodin put it, "With the right kind of people at the helm, it works."

John Shea

More honors for Armstrong

Clay M. Armstrong, M.D., professor of physiology at Penn since 1975, has added two more awards to his *curriculum vitae* in the last few months. Armstrong, who shared the 1999 Albert Lasker Basic Medical Research Award from the Albert and Mary Lasker Foundation, received the 2000 John Scott Award in January and the Gairdner Foundation International Award for Medical Science in April. Armstrong's research involves the "gating" process, which opens and closes ion channels, and his work is widely respected for expanding scientific understanding of the human body's electrophysiology.

Armstrong is one of four scientists to receive this year's Gairdner International Award, which has been bestowed by the non-profit foundation annually since 1959. Winners are selected in a secret ballot by a committee of scientists from Canada, the United States and the United Kingdom. Of 251 past recipients, 54 have gone on to win the Nobel Prize. The other three scientists honored include Bertil Hille, Ph.D., of the University of Washington, and Roderick MacKinnon, M.D., of Rockefeller University, who have also worked on ion channels and who shared the Lasker Award with Armstrong.

The John Scott Award, which was announced in January, is presented by the Board of Directors of the City Trusts of the City of Philadelphia. The awards have been made since 1834, and recipients include Mme. Curie, Thomas Edison, and Jonas Salk.

Stretching neurons to induce growth

The common wisdom is that tension is bad for the nerves, but it seems that a little applied tension might be good for nerve cells. Researchers at the Medical Center have been able to grow neurons – by stretching them. The stretched neurons, they hope, offer a new means of bridging damaged areas of the nervous system.

Tommy Leonardi

Douglas H. Smith, M.D., left, and David F. Meaney, Ph.D., are exploring ways to bridge damaged areas of the nervous system.

Using a motorized device to pull connected neurons slowly away from each other, the Penn researchers have discovered that the connecting nerve fibers, or axons, grow longer in response to the strain. In addition, the researchers have grown these elongated nerve fibers directly on a dissolvable membrane, ready-made for transplant.

"Most studies have examined axon growth in terms of how axons sprout from one neuron and connect to another," says Douglas

H. Smith, M.D., associate professor of neurosurgery and lead researcher on the project. "But there is an equally important form of axon growth that has been overlooked, the growth of axons in terms of the growth of the entire organism. In a way, stretching is akin to how nerve cells grow in developing children – as they get taller, their axons get longer."

Besides Smith, the Penn research team includes David F. Meaney, Ph.D., associate professor of bioengineering, and John A. Wolf, a graduate student in neuroscience who is also a research specialist in the Department of Neurosurgery. Their discovery was published in the April edition of *Tissue Engineering*. Their findings, which have evolved from Smith's continuing research into how neurons respond to their environment, also represent a departure from other methods of restoring neural pathways in spinal-cord injuries. One approach has been to transplant a synthetic scaffolding across the injured area and then use a trail of attractive chemicals to entice axons to grow out from one end of the lesion and connect with viable nervous tissue on the other side. While these attempts have had limited success in the laboratory, they have been hampered in live subjects by, among other things, the body's innate desire to stop neuron outgrowth.

According to Smith, "Once somebody's nervous system is already formed, further outgrowth could cause a mass confusion, so the body actively produces chemicals that stop axon growth."

But it was the inherent ability of already-connected axons to grow during natural development that gave the researchers the idea to stretch axons in culture. Smith and his colleagues began with a group of neurons grown in a culture across two membranes. Using a motor that could function in precise increments, they separated the two membranes by a few thousandths of a centimeter every few minutes – a remarkably large distance on the cellular level. Eventually, they were able to stretch the neurons an entire centimeter, and Smith could find no physiological reason why they could not be stretched even further. Reporting on the Penn findings, *The New York Times* noted that "No other technique for inducing axons to grow" across gaps created by injury "has produced axons as long and thick as Dr. Smith's" (April 17, 2001).

"We believe that, as we put pressure on the axons from either end, the axon begins to add a little to its own internal skeleton in response," explains Smith. "It is sort of like the little boy who tries to get taller by having his siblings pull on his limbs, only in this case it seems to work."

During these experiments, Smith noticed another curious phenomenon. "We began to see that the stretch-grown neurons could actually organize themselves into bundles, nerve fibers of composed of thousands of axons, and these bundles gradually consolidated into even larger tracts." In theory, these large tracts could serve as the bridge across damaged tissue, connecting either side and allowing the nerve signal to cross. In fact, it is likely that researchers would not have to modify the stretched neurons before transplanting, because the body easily absorbs the membranes used in the stretching process.

"Axons are promiscuous little things," says Smith, "and we're counting on their innate tendency to feel around and make new connections."

Commenting in *The New York Times* on the Penn research, Edward Wirth, M.D., a neuroscientist at the University of Florida, called the stretching strategy "a fundamentally novel and very elegant approach."

Smith conceives of using this approach for other types of neural injuries that affect long axon tracts, such as optic nerve damage and peripheral nerve damage. "We are only at the beginning of learning what we can do with this concept."

Greg Lester

Penn scores high in the rankings again

The University of Pennsylvania School of Medicine has again been ranked one of the top medical schools in the nation, according to an annual survey of graduate schools conducted by *U.S. News & World Report*. In the magazine's April 9th issue, Penn was ranked fourth among research-oriented medical schools, the only one in the Delaware Valley named in the top 40. Ranked ahead of Penn were Harvard University, Johns Hopkins University, and Duke University; Penn was ranked fourth with Washington University in St. Louis. Last year, Penn was ranked third in the nation.

Penn's School of Medicine was ranked in the top ten in five of the eight specialty programs by deans and faculty at peer institutions: women's health (3rd), drug/alcohol abuse (8th), geriatrics (10th), internal medicine (6th), and pediatrics (3rd). In the annual rankings of the top schools for primary care, Penn was ranked 32nd with four other schools.

Penn's School of Medicine was also second in total funding from the National Institutes of Health for Fiscal Year 2000. It is the third year in a row that Penn finished behind only Johns Hopkins in this important barometer of research strength. Penn's total funding for research, training, fellowship, and other grants was $269,936,771. The rest of the top five included Washington University in St. Louis, the University of California at San Francisco, and Yale University.

Three of Penn's departments were ranked number one in NIH funding: dermatology, radiology (which includes radiation oncology), and pathology and laboratory medicine. Ten more departments were ranked in the top five: Biochemistry and Biophysics; Biostatistics and Epidemiology; Medicine; Neurology; Obstetrics & Gynecology; Ophthalmology; Pharmacology; Rehabilitation Medicine; Physiology; and Psychiatry.

LETTERS

HIGH ON HIGH

I am an alumnus of the "late" Graduate School of Medicine (1952) and receive *Penn Medicine* as a perk for that fact alone. The Fall/Winter 2000 issue's cover article by Lisa J. Bain is great reading because it is great writing and a great subject.

Having been a member of the male world for seventy-eight years, it does me good to see a male editor feature in his pages a woman pediatrician/scientist, Katherine A. High, M.D., on a cutting-edge, scientific subject – gene therapy for patients with hemophilia.

Is there an Internet address from which I could download "High Hopes for Hemophiliacs" for personal use?

Charles Burns Roehrig, M.D., G.M. '52

The editor replies: I regret to say that *Penn Medicine* is not currently available on the Internet. We are working toward making it accessible, perhaps by later this year.

A QUESTION OF DISTRIBUTION

The Gambles ["Priority: Financial Aid," Fall/Winter 2000] could have remained anonymous much more easily if they had used their money to lighten all Penn Med students' debt loads, not just a select few. A few thousand dollars per year, after four years, would have made a big difference for me. I would be interested to see any data that the Endowed Scholars chose fields that are less remunerative or that they practice in underserved areas; I doubt that such a pattern exists, judging by the career goals of the Scholars I have met.

A Penn Med Alum

Krista J. Mattox, Associate Executive Vice President, Medical Center Development and Alumni Relations, replies: The ultimate career paths of the Twenty-First Century Scholars cannot be analyzed until the students complete their residencies. However, they all recognize and value the freedom of choice they have because of their lack of debt.

Walter and Anne Gamble are committed to a vision of debt-free status for all students at the University of Pennsylvania School of Medicine. They have worked tirelessly to help accomplish this goal. Their initial gift provided for merit-based scholarships. The subsequent gifts – and many of those inspired gifts from others – have contributed to need-based scholarships.

Student financial aid remains a top priority in all of our fundraising efforts, and we will continue to explore avenues to easing the financial burden of our students. With the generous support of visionary donors like Walter and Anne Gamble, Penn medical students will be able to follow no higher consideration than their heart when deciding on their career path.

WAS HE FIRST?

Who was first? Continuing your theme of the summer edition of *Penn Medicine* [whether Penn Med or Michigan had the first teaching hospital] – I am a graduate of the University of Pennsylvania Graduate School [of Medicine], Class of '47. I worked with Dr. Peter P. Mayock (uncle of Dr. Robert L. Mayock) for many years, and he graduated from the University of Pennsylvania Graduate School in 1912. He used to say he was the first and only student and the course was six weeks. When he finished, the images in the cystoscope were righted, and he stayed an extra week. He established urology in this area as a first-class specialty. I would like to establish whether or not Dr. Peter P. Mayock may have been the first trained graduate school urologist in the country.

Charles N. Burns Sr., M.D., G.M. '47, F.A.C.S. Kingston, Pa.

The editor replies: Mark Frazier Lloyd, director of the University Archives and Records Center, turned up a news clipping about a testimonial dinner held in 1959 by the Northeastern Pennsylvania Urologic Group in honor of Dr. Peter Paul Mayock Sr. It stated that Dr. Mayock, in his acceptance speech, paid tribute to his "preceptor," Dr. Benedict Jones Weatherby. It also stated that Mayock was "the first practicing urologist in northeastern Pennsylvania" and that he "has been chairman of the Department of Urology at Mercy Hospital a number of years." According to Lloyd, "There is nothing in the 1959 clipping about the elder Mayock's medical education other than the reference to his 'preceptor.' This suggests to me that he may not have attended medical school, but may have been apprenticed to medicine (as most American physicians were prior to the early 20th century reforms in medical education)."

A clipping from 1961 reported that the Luzerne County Medical Society also honored Dr. Mayock, claiming that he "established the first complete, modern urology department in this county." As Lloyd points out, the key words in that phrase are *complete* and *modern*, but no definition is provided. The clipping also stated that Dr. Mayock was "the first graduate student in urology at the University of Pennsylvania in 1912." Yet Lloyd notes that the clipping makes no mention of the Graduate School of Medicine in 1912; indeed, it was not established until 1916 (and not given the name "Graduate School of Medicine" until 1919). Lloyd also checked the University catalogs for four years, 1910-1914. He searched the lists of medical students in four separate classifications: post-graduate students in the School of Medicine, all four classes of students in the undergraduate M.D. program, "special" students in medicine, and medical students taking courses in public health. No person surnamed Mayock appeared in any of the lists in any of the four years.

The only other possibility Lloyd raises is that Mayock attended the Medico-Chirurgical College of Philadelphia (which merged with Penn in 1916) or the Philadelphia Polyclinic (which merged with Penn in 1918).

The conclusion? The historical claim for Dr. Mayock cannot be substantiated from the records at hand. My thanks to Mark Lloyd for his diligence.

A man of many PARTS: poetry, art, running, her

Garret FitzGerald takes his responsibilities as mentor seriously. Here he confers with Dr. Emer M. Smyth, a research associate in the Center for Experimental Therapeutics.

Although he shares his name with the man who was prime minist during much of the 1980s, Penn's Garret FitzGerald has been est international reputation of his own in the fields of medical and p research. And he seems equally adept serving as a scientific me marathon, or recommending a book of poetry.

By Kristine Conner

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In an essay published in *The New York Times* last October, actress Chris Chase responded to the news that her brother Paul Greengard had won the Nobel Prize in Physiology or Medicine. With a tone of amazed befuddlement, Chase looked back on a lifetime of never really understanding what he did, such as studying the "thermodynamics of adenylyl cyclase reaction." But Chase's breakthrough came when she read the newspaper reports on her brother's award, which finally translated his mysterious discoveries into human terms. She learned that her brother's work related to how brain cells communicate and that one day this research might be used to help people with Parkinson's and Alzheimer's disease.

This essay stuck with me as I started learning about the work of Garret A. FitzGerald, M.D., chair of Penn's Department of Pharmacology, director of the Center for Experimental Therapeutics, and Robinette Professor of Cardiovascular Medicine — except instead of adenylyl cyclase, I was encountering terms such as eicosanoids, isoprostanes, and arachidonic acid. (When I mentioned the essay to Dr. FitzGerald during our first meeting, he knew just what I was talking about; it turns out that he has a daily habit of reading *The New York Times, The Wall Street Journal,* and, as a Dublin native who maintains an interest in Irish sports, politics, science, and literature, *The Irish Times* on the Web. He jokes that he has not yet been "sufficiently acculturated" to read *USA Today*.) But I soon found that I would not have to make the mental leap that Chris Chase did to appreciate her brother's work, for two reasons.

First, Garret (he insists on first names) is one of the few scientists who works on the interface between basic and clinical research. Second, FitzGerald was extremely accommodating to my layperson's perspective. I came to attribute this to what more than one of his colleagues would later describe as his "sense of humanism," as well as the fact that he doesn't see the world only through the eyes of a scientist. Given how prolific he is as a researcher – with more than 260 studies published, millions of dollars' worth of grant money earned, and a wide range of committee and editorial board work – it would appear that he must pursue science with a single-minded intensity. In actuality, he has what Irish colleague Desmond Fitzgerald, M.D. (small "g," no relation), director of the Centre for Cardiovascular Science at the Royal College of Surgeons in Dublin, described to me in an e-mail as a "frightening knowledge of classics, literature, art, and music" — and, he added, "he's very funny in an irreverent Irish way" to boot. Garret FitzGerald (or "Big G," as some of his colleagues fondly nicknamed him some years ago) has an intellectual curiosity that transcends science, and somehow he finds time to satisfy it.

If you've ever counseled a patient to take aspirin because of its cardioprotective effects, prescribed one of those recently approved COX-2 inhibitors such as Celebrex or Vioxx, or fielded questions from patients about antioxidant vitamins, then you have some familiarity with the questions that Garret FitzGerald has been working on. He simplified matters by explaining that he has spent the past 23 years working in one biochemical pathway. "As technology changes, the precision with which you can get answers changes," he says, "and the trick is to stay focused on a small question."

Early in his career, he developed an interest in understanding how the hormone-like fatty acids called prostaglandins modify the action of blood cells on the vessel wall, and then how this mechanism underlies the pathophysiology of certain conditions, such as thrombosis and atherosclerosis. (This year, he's serving as chair of the American Heart Association's Council on Arteriosclerosis, Thrombosis, and Vascular Biology.)

Prostaglandins are formed by the action of the cyclooxygenase (or COX) enzyme on arachidonic acid in the cell membranes, FitzGerald explains, and he and his colleagues have helped to elucidate how these enzymes work. Their studies have contributed to our understanding of why it's rational to use aspirin, a COX-inhibitor, as a cardioprotective measure; for this work, FitzGerald won the first European Prize for Aspirin Research in 1993. He's also helping to elucidate the mechanisms of COX-2 inhibitors, the so-called "new generation of painkillers," and how they might best be used.

In doing this work, FitzGerald has always blended basic science with clinical research: "For a long time, it didn't have a name, but translational medicine is what I have been doing throughout my career." Upon starting his premedical studies at University College Dublin in 1968, Garret had his sights set on becoming an orthodontist, but soon found himself interested by the research aspects of medicine and, more specifically, pharmacology. As he recalls, "I liked the sciences, and I liked pharmacology, but what was missing for me was the clinical extension." When he saw a poster for a day course in clinical pharmacology that was being offered in London, he decided to attend. The course excited him about the possibility of doing research with an eye toward developing therapeutic applications that would help people.

FitzGerald followed his medical studies at University College Dublin with internships at St. Vincent's Hospital Dublin, graduate work in statistics at Trinity College Dublin and the University of London, and clinical pharmacology fellowships at the Royal Postgraduate Medical School in London and the Max Planck Institute in Cologne, Germany. He then spent the 1980s at Vanderbilt University in Nashville, Tennessee, where he eventually became chief of the division of pharmacology, director of the training program in clinical pharmacology, and the William Stokes Professor of Experimental Therapeutics. What FitzGerald calls his "homing gene" led him back to Ireland in 1991; he became chair of the Department of Medicine and Experimental Therapeutics at University College Dublin and director of the Centre for Cardiovascular Science. After just three years, however, his sights turned back to the United States, not only because he had realized that this was really his home, but also because he felt that this was a better climate for the kind of science he wanted to do.

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Another of FitzGerald's passions is running. On Locust Walk, he is accompanied by Colin D. Funk, Ph.D., center, and Daniel J. Rader, M.D., right.

Since arriving at Penn in 1994 as founding director of the Center for Experimental Therapeutics (CET) and being appointed chair of the Department of Pharmacology two years later, FitzGerald has facilitated the integration of traditionally separate branches of research into what he has always seen as a more productive model of solving problems related to human disease. He insisted on the word *facilitate* again and again during our conversations, crediting the many colleagues who have been instrumental in the development of CET and its relationship with the General Clinical Research Center (GCRC) housed within HUP. Some colleagues, in fact, have been collaborating with him since his days in Nashville and Dublin – and even moved across the world to work with him. FitzGerald notes that the structure that gives him responsibility for the two centers and the department sends an important message about aligning the missions of scientists in the lab and physician-researchers who work with patients. As he wrote in his first "chairman's corner" in the pharmacology department's newsletter in the fall of 1996, this structure "brings the rigors of basic science to bear on clinical scientists, while it also renders the clinical relevance of purely basic science projects more tangible." CET faculty are drawn from the departments of Medicine and Pharmacology, and the overall vision is to foster research that uses drugs as probes of disease mechanism and develops more sophisticated approaches to dose finding, based on understanding the mechanisms of drug action and exploring individual differences in drug response.

CET faculty members on both sides of the research fence say they appreciate and benefit from FitzGerald's ability to bridge that divide. "There are not many scientists who can do both basic and clinical research, and I like that in

him," says Colin D. Funk, Ph.D. A professor of pharmacology, Funk has been at Penn for five years but first worked with FitzGerald at Vanderbilt. Funk is a basic research scientist who uses gene-disrupted mouse models to study cardiovascular function and inflammation. FitzGerald "got me going" on atherosclerosis, he recalls, and he admires FitzGerald's way of seeing into the mechanisms of cardiovascular disease.

On the other side is Emma A. Meagher, M.D., an assistant professor of medicine who serves as associate director of the Center for the Assessment and Treatment of Complex Hypertension and as associate director of the Cardiovascular Risk Intervention Program. "Garret's a master at thinking about how we can marry the mind of the busy clinician with that of the researcher in the lab," she says. Describing herself as "a pure clinician" when she first started working with him in Dublin eleven years ago, she says he basically trained her in how to do research. When she arrived at Penn with him, he encouraged her to use that experience to develop the new Patient-Oriented Research Program, which provides formal opportunities for M.D. and Ph.D. students to learn the ins and outs of clinical research. Meagher is the program's director.

According to FitzGerald, the emphasis on translational medicine that the Center for Experimental Therapeutics embodies is getting more and more attention – and funding. "The dearth of trainees with both kinds of expertise has been recognized," he says. This was the subject of an editorial last March in *The Boston Globe*, written by a researcher at Massachusetts General Hospital and a Harvard professor of clinical medicine. "In our excitement about the progress of science," they wrote, "we cannot forget that determining the DNA sequence of a gene, or understanding how two proteins bind to each other in a test tube, or learning how a particular type of cell grows in a petri dish, is not equivalent to developing treatments and cures for complex human disease."

FitzGerald stresses that he takes the most pride in serving as a role model for the young scientists who are looking to do both basic research and clinical work. "Any program is only as good as the young people in it," he says. He is also proud of how the six-year-old CET has developed strong cardiovascular, cancer, and neuropharmacology research arms, with pharmacogenetics currently under development. Finally, he notes that the Department of Pharmacology has gone from #15 to #2 in NIH funding, and that CET is now the main user of the General Clinical Research Center. He assigns the lion's share of the credit to the people he works with, while they credit him.

Says Meagher: "He has a real gift for bringing people together and bridging disciplines, and this is the key to success."

If fashion has smiled on this approach to pharmacological research, it also has smiled on the antioxidant research done by FitzGerald and his colleagues. For years now, antioxidant vitamins have been hyped by their manufacturers and the media as a weapon in knocking out the oxidative stress that can lead to heart disease, cancer, and other illnesses. We now have millions of healthy people popping vitamins every day, but there has been no rational scientific basis for such strong faith in antioxidants. Part of the problem is that so-called free radicals — products of normal metabolism and of environmental exposures such as alcohol and tobacco, which bind to healthy cells and cause what's known as oxidative damage — are extremely evanescent. It was difficult to measure the damage associated with them.

FitzGerald and his colleagues at CET — including Meagher, Daniel J. Rader, M.D., and Domenico Praticò, M.D. — have been studying isoprostanes, which are biochemical markers produced when free radicals attack arachidonic acid. (FitzGerald describes isoprostanes as the "mirror image" of the prostaglandins that interested him early in his career.) Over the past five years, the Penn scientists have demonstrated that isoprostanes can be measured in the body fluids and tissues of both animals and humans. Their series of studies has shown that isoprostane levels are elevated in the presence of conditions such as high cholesterol, atherosclerosis, tobacco and alcohol use, alcohol-induced liver disease, and chronic obstructive pulmonary disease. The levels are also elevated following heart bypass surgery or heart attack treatment during the critical period known as reperfusion, when blood flow is restored to the heart muscle.

Working with Virginia M.-Y. Lee, Ph.D., and John Q. Trojanowksi, M.D., G.M.E. '80, Ph.D., directors of Penn's Center for Neurodegenerative Disease Research, FitzGerald and his colleagues recently showed that isoprostane levels were elevated in the frontal and lobal areas of the brains of people who died of Alzheimer's disease. All of these studies suggest a rational basis for understanding a range of diseases in terms of the oxidative damage our bodies undergo over time — a process akin to the rusting of metal — and applying therapies accordingly.

"A picture is beginning to emerge about the functional relevance of oxidative stress," FitzGerald notes, "and this opens the door for elucidating the clinical pharmacology of antioxidants." Using isoprostanes as a biochemical marker of this stress has the potential for allowing us to make rational, targeted use of antioxidant vitamins, instead of assuming that they are always good for all people. A mouse model has already shown that the antioxidant action of Vitamin E, as tracked through isoprostane levels, significantly reduced atherosclerotic damage to cardiovascular tissues. "Before you can perform rational clinical trials, you have to have a benchmark,"

says FitzGerald, and now this benchmark can be used to evaluate the use of antioxidants in humans. The day may come when physicians can measure a patient's level of oxidative damage through a simple urine test and then make appropriate recommendations about antioxidant therapy.

FitzGerald's other work in this same biochemical pathway has led to many discoveries with important therapeutic implications — some well-received, some not so well-received. He says that he did "a piece of the work" on understanding the cardioprotective benefits of aspirin, helping to show how it inhibits the cyclooxygenase enzyme that converts arachidonic acid into prostaglandins. His interest in this area continues, and recently he and Francesca Catella-Lawson, M.D., who has since left Penn, published a study showing that taking Ibuprofen before aspirin could actually interfere with its cardioprotective effects. Two years ago, FitzGerald's lab was the source of an important finding about so-called super aspirins, COX-2 inhibitors such as G. D. Searle's Celebrex (celecoxib)and Merck's Vioxx (rofecoxib), now being used by millions of people with osteoarthritis and rheumatoid arthritis.

In a study of celecoxib funded by Searle, FitzGerald found that it suppresses prostacyclin, a hormone-like substance produced in the walls of blood vessels that acts to dilate the vessels and inhibit platelet aggregation, or clotting. This discovery raised a red flag that Celebrex and other COX-2 inhibitors might increase the potential for heart attacks and strokes in groups at higher risk. I asked Garret if he had experienced any backlash from these pharmaceutical giants after the findings were published in the January 1999 *Proceedings of the National Academy of Science* and promptly picked up by the news media. While he would not discuss the specifics of the situation, he would speak in general terms about the importance of the independently funded academic research system as a check on industry — a system that ensured his freedom to raise questions about already-approved medications that seemed to guarantee huge profits.

FitzGerald often emphasizes the collaborative nature of his work: *"Art is I; science is we".*

"In academia, we're only responsible to the public health and telling the truth as we see it, telling the bad news as well as the good news," he says. "The pharmaceutical industry is wonderful in terms of innovation, but it's a business, and that's always a big constraint." The interface between industry and academia is essential and "90% productive," he says, but those who choose to work in the latter have to maintain an independent point of view. NIH funding, he believes, is what guarantees that independence.

A decade ago, FitzGerald tried to replicate this publicly funded academic research structure in his home country. But as chair of the Department of Medicine at University College Dublin and Mater Hospital, he faced what he calls "strong personal resistance" from physicians who did not want him to impose an American-style academic structure on the hospital. Soon he came to realize that political struggles would consume most of his time. Nevertheless, he and colleague Desmond Fitzgerald were able to establish the Centre for Cardiovascular Science, which is now thriving at the Royal College of Surgeons in Dublin. In an e-mail, Desmond Fitzgerald told me that Garret, who serves as advisor to the Irish government, deserves credit for the increasing amounts of public money now being poured into research there (billions now instead of millions). Garret FitzGerald says that he remains very interested in seeing his home country become more of a research leader and is "very much engaged with what's going on there." Still, he appreciates the "happy synthesis of crisis and opportunity" that led him back across the Atlantic to Penn.

FitzGerald has an incredible capacity for being in many different places, both physically and mentally, in rapid succession. The first time I met with him last fall, he had just returned from a series of scientific meetings in Japan, a weekend in Chicago for his son's wedding, a lecture at the Royal College of Surgeons in London, and a meeting at a Stamford, Conn., biotechnology company on whose board he sits. He was also getting ready to run the New York City Marathon (which he finished at a very respectable 3:38:40). When we last met before the winter break, FitzGerald had just finished a whirlwind tour through Europe, with stops in Berlin, Paris, Rome, and Lisbon, for activities ranging from serving on an international awards committee meeting to delivering the keynote address at

FitzGerald is as much at home among books as he is in a laboratory.

the European Cardiac Society. He also made a stopover in Dublin to have dinner with his parents. "This is a global game, and you have to be out there participating," FitzGerald says. Running provides the perfect way for him to get out and see his surroundings when he's on the road — and to stay in shape for marathons.

On top of all this, he manages to act as an effective mentor to the young scientists in his lab and as a sounding board for his colleagues, and he makes it a point to be available electronically if he's not available in person. (In one of his chairman's columns for the department newsletter, he refers to "the umbilical features of this portable computer which guarantee a narcotic connectivity with Philadelphia.") For FitzGerald, the core pleasure of science lies in collaboration and friendship, and he's worked hard to create a research environment that is as free as possible from what he calls "competitive anxiety."

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FitzGerald shares a laugh with John A. Lawson, a laboratory director in the Center for Experimental Therapeutics.

Domenico Praticò, M.D., research assistant professor of pharmacology, started working with FitzGerald as a postdoctoral fellow in 1992 and then followed him to Penn in 1994. "Some principal investigators want to control your work," he recalls, "but Garret gave me the freedom to use my own brain. He's open-minded, he discusses things, but then he lets you take it from there." When FitzGerald offered him the opportunity to continue working with him at Penn, Praticò says, he did not hesitate. Emma Meagher has a similar take on FitzGerald's skills as a mentor. In developing the Patient-Oriented Research Program, she says, "He gave me constructive input, but he let me make the decisions and figure out what was most appropriate. I think he's a master at identifying someone's potential as raw material and then providing them with the wherewithal to realize that potential."

And this is what FitzGerald says he enjoys most: working with the next generation of scientists, showing them what's possible, and building their confidence. "I'm not a blue-ribbon scientist; I won't win the Nobel Prize," he says. "My joy is watching the evolution and achievement of people who work with me. They are your legacy; and you live for their achievements." Again, he emphasizes the collaborative nature of his work: "Art is I; science is we."

Research associates Peter McNamara, Ph.D., and Emer Smyth, Ph.D., both of whom hail from Ireland and have been working in FitzGerald's lab for a few years, say they're amazed at the amount of confidence he has in them. "With Garret, nothing is impossible," McNamara says. "He makes me feel like I could be the head of the National Academy of Sciences or the head of a biotechnology company, if I wanted to be." And both say they appreciate his accessibility on a personal level. McNamara remembers talking World Cup Soccer with Garret instead of science during their first meeting. Now they have a tradition of watching the Six Nations Rugby Tournament at the Dickens Inn in Philadelphia's Old City. Smyth says that Garret is the kind of person you can have "good fun slagging with." (A quick "Google" search reveals the following definition of *slagging:* "the delicate art of teasing someone in such a fashion that they look forward to it; practiced widely throughout Ireland by all manner of people.")

Perhaps what colleagues view as FitzGerald's sense of humanism derives from the fact that he has so many interests besides science. He's an avid reader of novels, histories, and biographies, and he has vast stores of cultural, historical, and literary knowledge on which to draw. His chairman's columns in the department newsletter quote authors as diverse as Shakespeare, the Czech novelist Milan Kundera, the Irish poet Seamus Heaney, and Henry Wadsworth Longfellow. It's clear that reading is an automatic part of his life, and he says he is disappointed when he asks medical school applicants what they're reading and "95 percent of them don't have an answer."

Garret also runs about 20 miles a week, stepping up his training just before a marathon — not the best way to train, he admits, but as much as he has time for. Given his philosophy of science, it's not surprising that he derives "a collective sense of accomplishment" from long-distance running. "Unless you are from the highlands of Kenya," he says with a laugh, "you're really only competing with yourself. There's no one you want to lose; you're all in it together."

He's also tuned into the needs and interests of the people who surround him. So it should not have surprised me to receive this e-mail a few weeks after our last meeting, a follow-up to a question I had asked him about his favorite writers: "I do have a woman writer to recommend to you; my favourite of all time, in fact, whom I forgot about when you asked me the question. Marguerite Yourcenar – try *Memoirs of Hadrian* for a kickoff, her masterpiece." ■

Kristine Conner, a free-lance writer in Bala Cynwyd, Pa., is the author of "The Many Lives of Asthma" (Penn Medicine, *Summer 2000).*

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Jessica Haffajee, a first-year student, takes Delano Cooper's medical history at the UCHC medical clinic.

In West Philadelphia, Penn medical students run and staff two clinics, which offer "a chance to help people" and an opportunity to gain valuable experience working with patients.

By Marie Gehret

CLINICA

Standing at the back of a makeshift auditorium in the basement of the St. Agatha-St. James Catholic Church at 38th and Chestnut streets, Lee Ann Draud signaled to get the congregation's attention. Her voice competed with the clanking of food trays, the din of light-hearted conversation and intermittent guffaws, and the bustle of twenty-somethings setting up equipment on stage. She introduced herself as the meal coordinator for the University City Hospitality Coalition, a nonprofit organization that has provided homeless and underprivileged members of the West Philadelphia community with hot meals and social services since 1986.

Nearly a hundred men, women, and children seeking warmth and nourishment turned out on this night — the Wednesday before Christmas — as the piercing cold had forced the city to declare a "code blue." Draud welcomed her guests as they ate, then ran down a list of nearby places that would be serving hospitality dinners on Christmas Day.

Across the room, five Penn medical students readied the UCHC medical clinic for business: They unloaded patient files and medical supplies; placed ward curtains and two wooden chairs at each of five exam stations; stocked the reception desk with a sign-in sheet and dozens of health-promotion pamphlets; and placed coloring books and crayons on a waiting-area table to occupy the children of patients.

The UCHC medical clinic operates Wednesday nights in conjunction with the soup kitchen and under the auspices of Penn's School of Medicine, offering free acute care, physicals, vitamins, seasonal flu shots, periodic TB screenings, educational materials, and referral services to patients in need. The clinic was established by Penn Med students in 1991 and continues to be run and staffed almost entirely by students. A faculty adviser is required

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At the UCC clinic, first-year student Emily Snyder takes Sonya Dove's blood pressure.

L C A R E

to serve as a preceptor, and a licensed HUP pharmacist dispenses a small formulary of medications such as antibiotics, decongestants, Ibuprofen, and ointments.

Midway through the meal, Kitty O'Hare, a second-year medical student at Penn, announced that the clinic was open and encouraged the diners to seek medical attention, particularly since the clinic would be closed the last Wednesday of December. Her appeal immediately drew eight men from the cafeteria-style tables; a handful of stragglers gradually got in line. Some had been there before. Some had even amassed thick files and developed a good rapport with the medical staff.

One by one, patients were seated at an exam station and then seen by the student assigned to him. Initially, the student took the patient's medical history, determined the chief complaint, and performed a physical. Then the attending faculty adviser stepped in and collaborated with the student to render a diagnosis and treatment plan.

"Students get seasoned pretty quickly," says W. Richey Neuman, M.D., M.P.H., the medical director of the clinic and one of 15 faculty preceptors. "At first, many of them are taken aback. But in a few months, they become veterans."

Neuman, who is also an assistant professor of medicine and a physician at the Penn Center for Primary Care, is seasoned himself. He has done volunteer work locally since his 1997 arrival in Philadelphia and has been involved in treating homeless people since his residency at Oregon Health Sciences University. In the early '90s there, he established a clinic for the homeless and later did the same at Yale University, where he took his fellowship. He admits he occasionally "raided the medical supply closets" in order to support his cause.

While times have changed for Neuman (who runs the UCHC clinic entirely aboveboard), he hasn't lost touch with the student perspective. "I think a lot of the students feel that this [volunteering] is a part of the humanistic mission of medicine," he says.

That seems true in large part, but O'Hare, for example, entered Penn Med with the intention of continuing the charitable work she had begun at her alma mater, the College of the Holy Cross in Worcester, Mass. "One motto of my college, and of the Jesuit order that runs the college, is 'Men and Women for Others'— the idea that service to others is part of our calling as human beings," she says. "My faith does influence my sense of social justice, which tells me that helping others is part of my role in life."

According to Michael Tracy, a second-year student who was finishing his term as a student coordinator, most of the medical students volunteer because, simply put, it gives them "a chance to help people."

And that it does.

As Marla R. Davis sees it, access to free health care in the city is a vitally important way to "fill the gaps" between the uninsured and insured, between the poor and privileged, between the sick and healthy. Davis is director of the University of Pennsylvania Health System's Office of Community Affairs, which serves as a liaison between medical students, community leaders, and UPHS administrators. She notes that Philadelphia has seen a "dramatic increase" in the number of uninsured residents over the last few years. West Philadelphia, in particular, records high rates of poverty (one in five people), and it is associated with disproportionately high rates of infant mortality and cardiovascular deaths.

On any given Wednesday, five to 10 patients visit the UCHC clinic. "It varies," says Tracy, who proudly points out that the clinic was open a record 51 weeks during his tenure last year. "Toward the end of the month, when money runs a little short, more people turn out for the meal, and therefore, the clinic. They are coming first and foremost for the meal," he explains, "so if we can get them in for that, we can treat them while they're here."

A wide variety of cases present at the clinic: sore throats, colds, rashes, sores — what Neuman calls the "bread and butter complaints." Sometimes, a patient may come in because a limb hurts, and it turns out to be gangrene. Another person may have an infection from sutures that were administered in an ER but never removed because he lacked insurance or continuity of care.

About half the cases are related to dental pain or dental problems that have resulted from a lack of preventive care, adds Susan E. Wiegers, M.D., an assistant professor of medicine who was the clinic's medical director for more than seven years. Although Penn's dental school conducts its own clinic at UCHC from time to time, "it's usually extraction or nothing," Wiegers says, "and many people don't want tooth extraction, especially in the front of their mouths."

Other patients have more chronic problems like high blood pressure, diabetes, and asthma, or emergencies such as chest pains and shortness of breath. The clinic is not equipped to handle those types of cases, nor can it afford to. (Its budget is in the low thousands, and it subsists on a Philadelphia Foundation grant, student-sponsored glove sales, and faculty fundraisers.)

Therein lies Wiegers's biggest frustration: the limitations of a free clinic that can't provide long-term and preventive care. As a result, Wiegers, the associate director of non-invasive imaging at HUP, has founded a sister hypertension clinic that will meet alongside the UCHC medical clinic a couple of times a month. The new clinic is funded by a grant from the Edna G. Kynett Foundation.

As a preceptor — and a physician dedicated to serving the poor — Wiegers impresses upon her stu-

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David Jackson, seated, was Stefan Zimmerman's first-ever director of the UCHC clinic, right, gives Zimmerman some

Health promotion and information are important parts of Sonya Dove to some relevant brochures.

Tommy Leonardi

patient. W. Richey Neuman, M.D., M.P.H., medical pointers.

what the UCC clinic offers. Here, Emily Snyder directs

dents that "medical problems vary by socioeconomic bracket." She says, "Since there is no city hospital in Philadelphia, there's perhaps no other way that they [students] could experience this."

Tracy agrees that the clinic — a soberingly realistic training ground — enhances a medical student's education. "Since most of the patients are from West Philly, the students are exposed to a population that they might not see in a formal clinical clerkship."

For O'Hare, the clinical experience has been valuable on many levels. "You learn skills here that you wouldn't [learn] in your first year or the beginning of the second year," she says with enthusiasm. "The faculty really let us do things on our own so that we can hone our physical exam skills, learn how to take blood pressure properly, and practice things like looking in ears and listening to the heart."

"It is a useful skill to learn to approach people who are different from you," she adds. "We are working with people who have HIV, STDs, addiction, suicidal [profiles]—people you wouldn't typically see at an academic medical facility. And it gives us the opportunity of seeing how the health-care system really works and who's left out of it."

At the same time, she admits that volunteering at the clinic can be emotionally draining: "The patients trust us, but we're only here for them once a week. It's especially hard seeing the children. I mean, I'm glad that they come in, but it's difficult knowing that they have to have dinner in a soup kitchen."

After spending more than 18 months at UCHC as a student coordinator and community liaison, O'Hare completed her stint in January, when a new group of first-year medical students took over. O'Hare and her classmates were responsible for soliciting and training the new recruits.

"There has been huge [student] interest this year," Neuman reports. There are about 10 to 15 coordinators and 20 to 30 other students who are involved in the clinic peripherally.

Another sizable contingent of Penn medical students is seeking pre-clerkship experience about two miles northwest of Penn's campus, at the United Community Clinics. This free clinic, which is also affiliated with Penn, meets Mondays from 6:00 to 8:00 p.m. at the First African Presbyterian Church at 4159 Girard Ave.

The United Community Clinics actually developed as a spinoff of UCHC. In 1995, Penn medical students Rachel M. Werner, M.D. '98, and Liza G. Presser, M.D. '98, who had participated in the Philadelphia Bridging the Gaps Consortium, teamed up with Eric W. Fleeger, M.D. '99, who had volunteered at Habitat for Humanity in West Philadelphia. The trio conceived of a clinic that would expand upon UCHC by incorporating a more multidisciplinary approach to care.

The students submitted a proposal to the School of Medicine and enlisted Penn's schools of Nursing, Dental Medicine, and Social Work as well. Once the clinic was approved, a lot of work still had to be done: fund-raising, drumming up volunteers, and finding a home. In fact, locating a suitable site was actually one of the trickier steps in the process, because a facility must carry liability insurance in order to house a medical clinic. Marla Davis and the Office of Community Affairs — as well as Rev. Ed Pinkney, then the pastor of First African Presbyterian Church — were instrumental in closing the deal. A sister church, Bryn Mawr Presbyterian, awarded UCC a generous start-up grant and continues to be a financial supporter.

Since opening officially in the fall of 1996, UCC has treated hundreds of patients in the East Parkside section of West Philadelphia. But perhaps the term "treat" is misleading. None of the UCC clinics — medical, nursing, dental, or social work — is designed to provide hands-on care. Instead, with students at the helm and a variety of resources at their fingertips, the UCC clinics aim to point people in the right direction.

"We try to hook people into the health and social-services systems

in the city," says Neal Lischner, a third-year medical student who has been a volunteer since 1999. "A patient may be here for a physical, but during the screening process, we find out that they have housing problems or they haven't seen a dentist in years." Drawing on its multidisciplinary approach to helping the *whole* patient, UCC refers within first, then provides entrée to city-wide services.

What appealed most to Dave Cowan about UCC was its commitment to holistic care. "I heard about the clinics when I interviewed with Penn," says the second-year medical student, "and was really excited about the opportunity to work with students from other schools to provide health-related services to folks in the West Philadelphia community." He adds that his wife was a graduate student in social work at the time and started volunteering with him. Cowan joined UCC in 1999 and went on to become one of its medical clinic coordinators.

The UCC medical clinic can aptly be described as a "well" clinic, and the majority of its patients (between two and 16 a night) are there for well visits, blood pressure and diabetes screenings, and physicals for athletic teams or driver's license exams. Just recently, the clinic added flu shots and TB screenings to its list of services.

As Kent Bream, M.D., the UCC faculty adviser, emphasizes, "Our goal isn't to practice medicine." Bream, an instructor and physician in Penn's Department of Family Practice and Community Medicine, explains: "We are not there to diagnose and treat pneumonia, for example. We are there to provide *care* and to make referrals when necessary."

Bream notes that most patients who pass through UCC are insured. They use the clinic not for health maintenance but for supplemental care when they have a cold or need a checkup. For people in the community, the clinic is appealing because of its location, evening hours, short waiting time, friendly staff, and an environment that does not look "institutional."

Indeed, the clinic has a charming informality that is very much true to its locale: UCC operates out of Fellowship Hall in the church's basement. A piano, a miniature stage, an American flag, brightly colored bulletin boards, and a nearby kitchen reveal the hall's more common function as a reception area and rehearsal room. But on Monday nights, the hall is transformed: An intake area is set up for patients to check in; four rows of folding chairs form a waiting area; and ward curtains arranged in a circle make up exam rooms. A long wooden table in the front of the room displays complimentary brochures and vitamin packets; a rarely opened box of pharmaceuticals filled with prescription and O.T.C. drugs is locked away in the back.

First- and second-year medical students run the clinic, although more advanced students often return to help. As with UCHC, the changing of the guard occurs in January. One faculty member is required to serve as preceptor for the group of five to 10 students each week. According to Bream, there are three permanent preceptors and about 15 to 20 "part-timers" who volunteer during the year.

Bream acknowledges that he is "very demanding" of the students. He wants them to stick their necks out, to use their instincts, and to be confident when they practice rudimentary skills such as taking a pulse or interpreting a blood-pressure reading. "Medical students inherently know how to do certain things, but they have a lack of confidence," he says. "I want them to stop being afraid of being wrong and say what they think."

Teaching the students how to touch and talk to patients is a primary goal of the medical clinic. In Bream's view, the students admitted to Penn Med "are selected for their book skills, not their personalities," which means that their educational — and socioeconomic — backgrounds could create barriers between them and their patients. Bream believes that mutual understanding can bring down those walls.

With proper guidance, students can indeed learn a great deal about their patients and themselves. "I had one patient who didn't believe in Western medicine and who was only at UCC because he needed a physical form filled out," recalls

Tommy Leonardi

Ronald B. Barg, M.D. '80, here taking Sonya Dove's vital

Tommy Leonardi

Under Richey Neuman's watchful eye, first-year student Brian

signs, is one of the faculty preceptors at UCC.

Callaghan, right, auscultates Albert Fountain at UCHC.

Christine Curley, a second-year medical student who has been a volunteer for more than a year. "It was an incredibly interesting interview because most patients you see in the hospital believe that Western medicine works — that's why they're there — so it was great to talk with someone whose view was completely different."

Sometimes Bream even engages the students in spontaneous role-playing in order to prepare them for potential patient encounters. In particular, the topic of sex education turns many students "beet red," he says. But it is a medical reality they can't avoid.

"I interviewed a woman who was HIV-positive and whose long-term lesbian partner had just died," Curley recounts. "It reminded me that you really don't know anything about a person just by looking at them and that you should never assume anything."

Last June, an HIV counselor from Philadelphia Health Alternatives was brought on site to educate patients about safe sex and sexually transmitted diseases, to provide condoms and referral services, and to offer HIV testing. Sometimes patients with high-risk factors are referred via the medical clinic; other times, people seek out the counseling on their own. Offering sexual counseling at a church is a rather progressive step. (Most Catholic churches, for example, refuse to distribute contraception on their grounds.) "The church here has been very active in supporting the clinic," says Autumn Grice, a second-year social work student at Penn who jumped at the chance to work at UCC a year ago because of its interdisciplinary component. "I think African-American churches are most in tune to what the community's needs are."

The community, in turn, has responded well to UCC. It took a while for the clinic to gain the trust of its neighbors; however, recent quality-assurance surveys indicate that the clinic is on the right track. Patient visits have steadily increased from less than 100 in 1996 to more than 600 in 2000. Like the students themselves, the patients seem to learn from their UCC experiences as well, and they are generally good-natured about participating in the students' medical education. UCC has also received a fair number of referrals from District Health Center No. 4 (located at 44th Street and Haverford Avenue), one of the city's free health clinics that consistently draws a large patient volume.

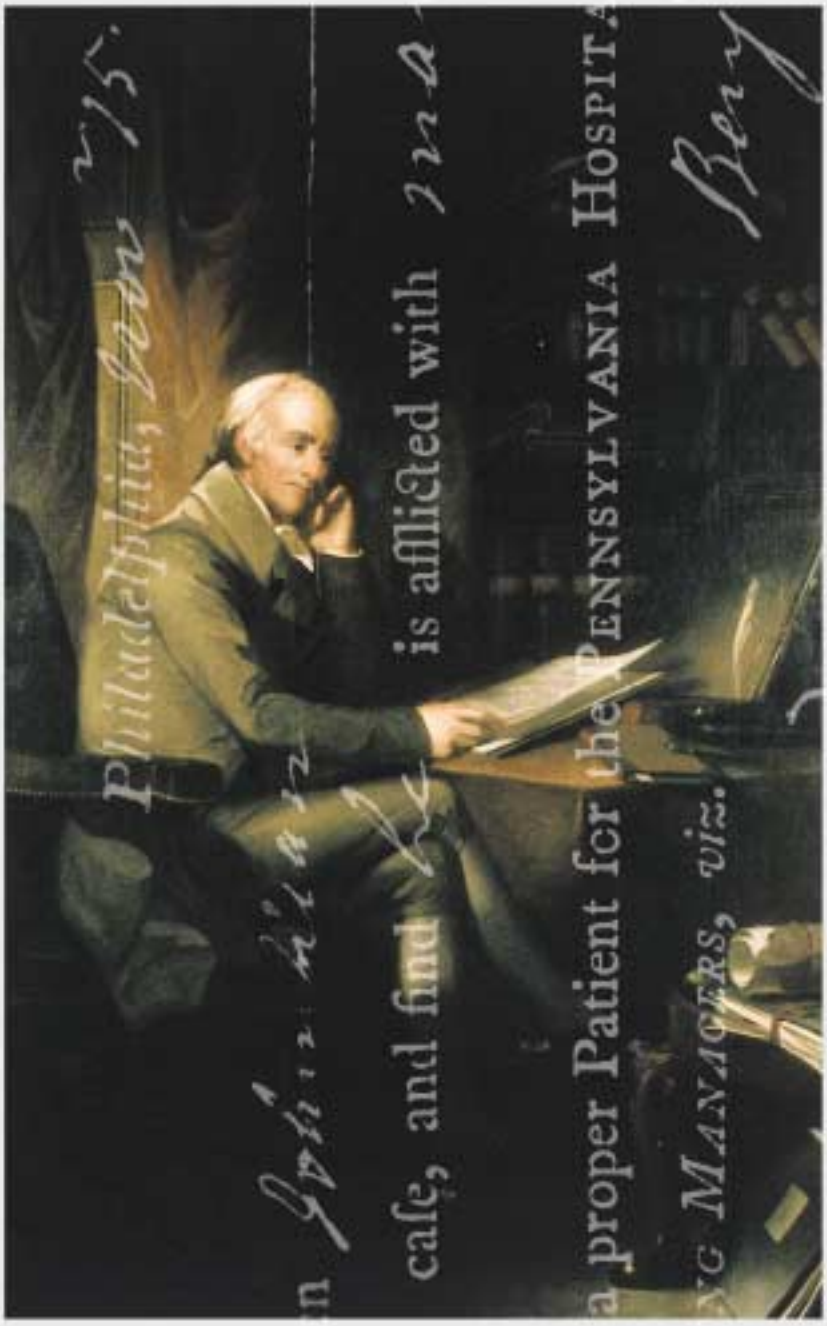
More patients means more experience for the students. Extensive patient contact is, after all, the best way for the student volunteers to grow and learn and become more self-assured doctors. As a first-year student, Nadia L. Dowshen was "definitely nervous" during her first patient encounter. "I have taken histories before and am comfortable talking to patients," she says, "but trying to do that and take blood pressure and listen to the patient's heart with little experience [simultaneously] was a little overwhelming. I'm getting more comfortable now." Dowshen, one of UCC's co-coordinators, strives to offer more community health services, including childhood immunizations, and more education on issues such as injury prevention and sexual health. As a Penn undergraduate, she founded and coordinated school-based health programs at Turner Middle School and University City High School.

Speaking about the medical students, Bream says, "I love to watch them improve over time. I may be biased, but I believe that our students who go through UCC do better in or work more comfortably in clinical clerkships than those who haven't. Of course, I have no real proof of that."

One of his veterans, Neal Lischner, agrees: "I definitely felt more comfortable in the hospital [clinics] than I would have otherwise."

For Dave Cowan, UCC is beneficial for another reason. "It provides many lessons about the value of service," he says. "Because we are so busy, and medical school is at times so demanding, it is easy, in the midst of studying for exams and memorizing minutiae, to lose sight of why you came to school and why you chose medicine as a profession. Working at the clinic lets you experience firsthand the true potential that the health professional has to positively impact people's lives." ■

Marie Gehret wrote about Janet L. Abrahm, M.D., in the Fall 1999 issue of Penn Medicine.



THE FIRST TURNS 250

Above: Dr. Benjamin Rush, on the staff of Pennsylvania Hospital from 1783 to 1813, was a medical teacher, social reformer, and signer of the Declaration of Independence. He was known also as a father of American psychiatry. The painting is by Thomas Sully.

Top Right: The first surgical amphitheater in American medicine opened in 1804. In use until 1868, it became well known as the site of many operations performed and lectures given by Dr. Philip Syng Physick.

Bottom Right: The medical library, begun in 1762, was used by physicians and students. In 1847, the American Medical Association designated it as the country's most important medical library.

This year, Pennsylvania Hospital, the oldest hospital in the United States, celebrates its 250th anniversary, and for much of that time, the histories of the hospital and of Penn's School of Medicine have been closely intertwined. Thomas Bond, one of the two founders of the hospital, has been called the nation's "father of clinical medicine," because in 1766 he initiated clinical instruction for Penn's medical students by taking them to the wards of the hospital. The other chief founder of Pennsylvania Hospital, Benjamin Franklin, is well known for his role in founding what eventually became the University of Pennsylvania. Benjamin Rush became the first professor of chemistry at the School of Medicine in 1769 – in fact, he held the first chair in chemistry in the nation. In 1783, Rush joined the staff of the Pennsylvania Hospital, where he became known for his advanced and humane treatment of the mentally ill.

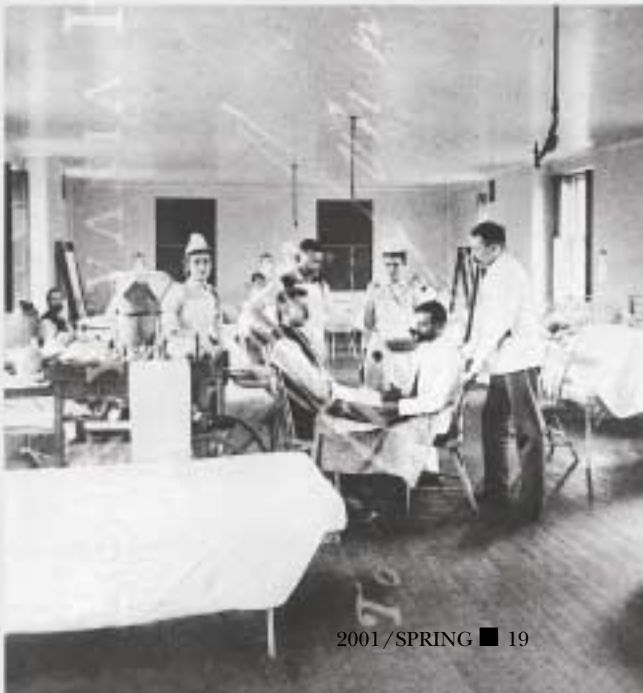
Another physician who figured prominently in the histories of both the School of Medicine and Pennsylvania Hospital was Philip Syng Physick. A surgeon, Physick originated the stomach pump at Pennsylvania Hospital in 1812. In *Innovation and Tradition*, one of the histories of the School of Medicine, he is said to have "joined Benjamin Rush as one of the first of the New World physicians to gain a reputation among his European counterparts." John Redman Coxe, a Penn professor of chemistry and later of materia medica, is credited with performing the first smallpox vaccination in Philadelphia – at Pennsylvania Hospital. During an outbreak of typhoid fever in Philadelphia in the 1830s, William Wood Gerhard, a Penn doctor of physic and alumnus of the school, brought his skills as a clinician and pathologist to bear on the confusion between typhoid fever and typhus. According to *Two Centuries of Medicine*, "Gerhard, intensely applying at the bedside and in the postmortem room of the Pennsylvania Hospital the principles he had learned in Paris, clearly distinguished the two diseases."

Given these and many other ties, it is no wonder that when Pennsylvania Hospital officially became part of the University of Pennsylvania Health System in 1997, leaders of both institutions underscored their shared histories. William N. Kelley, M.D., then the dean of the School of Medicine and CEO of the Health System, even joked that Pennsylvania Hospital "has the same portraits *we* have" in its gallery. Over the years, many Penn faculty members have practiced at Pennsylvania Hospital, and many students and residents have gained valuable experience there as well. Until the University of Pennsylvania moved to West Philadelphia in the 1870s, Pennsylvania Hospital was the most important clinical teaching site for the School of Medicine. Here we offer a brief salute to one of the few American medical institutions that can rightly claim to be older than the School of Medicine.

The East Wing of the Pine Building, on Pine Street, has been in continuous use since 1755; its center section opened in 1804.

The nation's first hospital apothecary (1752) was located in a small building next to the East Wing. When the Center Building opened, the apothecary moved to the first floor of the new building.

A ward photographed in the 1890s.



Progress Notes

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40's

G. Denman Hammond, M.D. '48, associate vice president of health affairs at the Keck School of Medicine at the University of Southern California, was chosen as the United States "Cancer Fighter of the Year" for 2000 by the Beckstrand Cancer Foundation.

50's

Frank J. Tornetta, M.D., G.M.E. '50, a Norristown, Pa., anesthesiologist, founded the Frank J. Tornetta School of Anesthesia in 1951. Last fall, the school, based at Montgomery Hospital, and La Salle University were awarded a three-year federal grant of nearly $1 million to educate certified registered nurse anesthetists who will work in urban and medically underserved areas. La Salle started its master's degree program in nurse anesthesia in 1999 through a partnership with the Tornetta School. In the 1970s, Tornetta helped develop Innovar, an intravenous anesthesia drug, along with Jansen Pharmaceuticals.

Antonio R. Silva, M.D. '57, has been appointed dean of the Graduate School of Public Health at the Medical Sciences Campus of the University of Puerto Rico. Most recently, after three decades in private practice as an obstetrician-gynecologist, he had been special assistant to the dean of academic affairs at the School of Medicine of the University of Puerto Rico and senior vice president of medical, dental, and professional affairs for Blue Shield, Triple-S of Puerto Rico.

Theodore L. Phillips, M.D. '59, chair of radiation oncology at the University of California at San Francisco, received the first Giulio D'Angio Chemoradiation Award last fall. Created by the Sequoia Regional Cancer Center and the ChemoRadiation Summit 2000, the award recognizes an oncologist who has made significant contributions to the science of chemoradiation. Phillips has published on radiation protectors and sensitizers, neutrons and heavy-particle beam therapies, hyperthermia and radiobiology, radiation-induced pathology, and normal-tissue tolerance. D'Angio, the award's namesake, is emeritus professor of radiation oncology at the University of Pennsylvania.

James C. Thompson, M.D., G.M.E. '59, professor of surgery at the University of Texas Medical Branch at Galveston, was elected to the Institute of Medicine of the National Academy of Sciences.

60's

Newell Fischer, M.D. '61, Bryn Mawr, Pa., is president-elect of the American Psychoanalytic Association. In December, he published a letter in *The New York Times* in support of medical privacy regulations proposed by President Clinton. Fischer is a clinical professor of psychiatry at the University of Pennsylvania Medical Center.

Barry Goldberg, M.D. '63, director of diagnostic ultrasound at Thomas Jefferson University Hospital, has received a program grant from the Radiological Society of North America to train African physicians in the use of the latest ultrasound technology. Professor of radiology at Jefferson Medical College and director of the Jefferson Ultrasound Research and Education Institute, Goldberg is a past president of the World Federation for Ultrasound in Medicine and Biology.

Jeffry J. Andresen, M.D. '64, Dallas, professor of psychiatry at the University of Texas Southwestern Medical Center, received the 2000 Edith Sabshin Teaching Award from the American Psychoanalytic Association at its annual meeting.

Richard W. Besdine, M.D. '65, was appointed director of the Center for Gerontology and Health Care Research at Brown University. The first David S. Greer, M.D., Professor of Geriatric Medicine at Brown Medical School, he is also director of the division of geriatrics at Rhode Island Hospital and the Miriam Hospital.

Mary Ferry Cunnane, M.D., G.M.E. '69, has joined the division of surgical pathology at Thomas Jefferson University Hospital.

70's

John G. Brehm, M.D. '70, has a new position as medical director for the West Virginia Medical Institute in Charleston, W.Va. The peer-review organization for West Virginia and Delaware, the institute also holds numerous contracts for utilization review and management of Medicaid programs in West Virginia and Virginia. It does research into quality issues in North Carolina and into long-term care for Federal government agencies. With a nationwide corps of 70 abstractors and chart review specialists, the institute also holds the contract for the External Peer Review Program for the Veterans Administration. Brehm's e-mail address at work is jbrehm@wvmi.org.

Edward H. Dench Jr., M.D. '72, G.M.E. '77, State College, Pa., an anesthesiologist with Pocono Anesthesia Associates, P.C., was elected vice president of the Pennsylvania Medical Society. He is slated to become president-elect next October and president in October, 2002. He is a former president of the Pennsylvania Society of Anesthesiologists.

Gloria A. Bachmann, M.D. '74, G.M.E. '78, chief of the obstetrics and gynecology service and director of the Women's Wellness and Healthcare Connection at Robert Wood Johnson University Hospital, in New Brunswick, N.J., received the Robert Wood Johnson University Hospital Award of Honor last May. According to the awards program, Bachmann's "commitment to women's health issues and empowering women to make informed decisions regarding their health care has been instrumental in the development and success of the Women's Wellness and Healthcare Connection at the hospital." She is a professor of obstetrics and gynecology and professor of medicine at UMDNJ-Robert Wood Johnson Medical School.

Verdi J. DiSesa, M.D. '76, a Chicago cardiologist, was named to a committee that evaluates candidates for the Heart of Chicago Award. The new award was established by the American Heart Committee and Pfizer, Inc., to honor the Chicago healthcare professional who has championed the cause of cardiovascular health in his or her community. A cardiac surgeon at Rush-Presbyterian-St. Luke's Medical Center, DiSesa is also the Mary and John Bent Professor and Chairman of the Department of Cardiovascular-Thoracic Surgery and professor of internal medicine at Rush Medical College. He is current president of the Metro Chicago Division of the American Heart Association.

James A. Hoxie, M.D. '76, professor of medicine at Penn and director of the AIDS and HIV Research Center, was elected to the Association of American Physicians last year.

Howard K. Rabinowitz, M.D., G.M.E. '76, professor of family medicine at Jefferson Medical College of Thomas

Jefferson University, was named to the Institute of Medicine of the National Academy of Sciences.

Diane K. Jorkasky, M.D. '77, who spent 13 years at SmithKline Beecham, has moved to Pfizer Pharmaceuticals as vice president for clinical sciences in Groton, Conn. She had been a clinical professor of medicine at Penn.

Richard D. Lackman, M.D. '77, G.M.E. '82, became chair of the Department of Orthopaedic Surgery at the University of Pennsylvania Health System last year. Professor of orthopaedic surgery, he joined UPHS in 1999 as chief of the orthopaedic oncology service at Pennsylvania Hospital.

Lewis A. Lipsitz, M.D. '77, has been appointed chief of the division of gerontology at Beth Israel Deaconess Medical Center. Lipsitz, who has been a member of the Beth Israel Deaconess faculty for more than 20 years, will continue to serve as vice president of medical affairs and the Usen Co-Director of the Research and Training Institute at Hebrew Rehabilitation Center for Aged in Boston. A professor of medicine at Harvard Medical School, Lipsitz is chair-elect of the Clinical Medicine Section of the Gerontological Society of America in 2001. His research interests include falls, fainting, blood pressure regulation, cognitive dysfunction, and improving long-term care for the disabled elderly.

Mark A. Kelley, M.D., G.M.E. '79, joined the Henry Ford Health System in Michigan last summer as executive vice president and chief medical officer. He was also named chief medical officer of the Henry Ford Medical Group. For the previous year, Kelley had been a professor and a vice chair of the Department of Medicine at Penn as well as chief of medicine at the Philadelphia VA Medical Center. From 1990 to 1999, he was vice dean for clinical affairs for the University of Pennsylvania Health System. An expert in pulmonary diseases and critical-care medicine, he is a fellow of the American College of Physicians and of the American College of Chest Physicians. He is chair of COMPACCS, the national manpower study on pulmonary and critical care.

80's

John Q. Trojanowski, M.D., Ph.D., G.M.E. '80, professor of pathology and laboratory medicine at Penn, was elected to the Association of American Physicians last year. He is codirector of the Center for Neurodegenerative Disease Research.

Reed Tuckson, M.D., G.M.E. '81, who had been senior vice president of professional standards at the American Medical Association, was named senior vice president of consumer health and medical care for UnitedHealth Group. He serves as the top physician liaison for UnitedHealth, the nation's second-largest health insurer.

Donald C. Dafoe, M.D., G.M.E. '82, was named the Samuel D. Gross Professor and Chairman of Surgery at Jefferson Medical College. Most recently, Dafoe was chief of the transplantation program at Stanford University Medical Center. He had earlier served four years as chief of transplantation at Penn.

Michael D. Caldwell, M.D., G.M.E. '83, has become director of the Marshfield Medical Research and Education Foundation in Marshfield, Wis.

Reynold A. Panettieri Jr., M.D. '83, G.M. '90, associate professor of medicine at Penn, was elected to the American Society for Clinical Investigation last year. His research focuses on the cellular and molecular mechanisms that modulate cell growth and activation of human airway smooth muscle.

Pamela S. Douglas, M.D., G.M.E. '84, is head of the cardiovascular medicine section at the University of Wisconsin-Madison Medical School.

Gary A. Koretzky, M.D. '84, professor of pathology and laboratory medicine at Penn, is president of the American Society for Clinical Investigation. He is director of the signal transduction program at the Abramson Family Cancer Research Institute.

Bruce T. Liang, M.D., G.M.E. '85, associate professor of medicine at Penn, was elected to the American Society for Clinical Investigation last year. He has developed cellular, biochemical, and molecular principles for the study of cardiac myocyte biology and signal transduction.

Julia M. Uffner, M.D. '85, and **Janice Kubo Hillman**, M.D., G.M.E. '86, who practiced at Bryn Mawr Medical Associates, part of Penn's Clinical Care Associates, have merged their practice with Haverford Medical Associates. They are now working with **Michael D. Flanagan**, M.D. '83 M, and John Hobson, M.D.

Stuart R. Lessin, M.D., G.M.E. '86, joined the medical oncology department of Fox Chase Cancer Center as director of dermatology. He leads multispecialty diagnostic and treatment programs for melanoma and other cancers of the skin. Previously, Lessin was codirector of the pigmented-lesion group at Penn and director of the melanoma core facility at the University of Pennsylvania Cancer Center. One of his special interests is cutaneous T-cell lymphoma, also known as mycosis fungoides.

Robert Noel Piana, M.D. '87, Nashville, has joined the division of cardiovascular diseases at Vanderbilt University Medical Center. He is director of cardiac catheterization laboratories at the Vanderbilt Page-Campbell Heart Institute.

Carmel M. Fratianni, M.D. '88, Springfield, Ill., has joined the faculty at Southern Illinois University School of Medicine as assistant professor of endocrinology, metabolism, and molecular medicine. For five years, she was an instructor in medicine at Harvard Medical School and an assistant in medicine at Massachusetts General Hospital.

90's

Gary S. Tennyson, M.D., Ph.D., G.M.E. '90, has left Orange Park Medical Center in Florida and joined the Department of Pathology of the Mayo Clinic in Jacksonville, Fla.

Ronald G. Collman, M.D., G.M.E. '91, associate professor of medicine at Penn, was elected to the American Society for Clinical Investigation last year. His research is focused on the viral and cellular basis of HIV-1 target-cell tropism, particularly macrophage tropism.

Alexander C. Spyropoulos, M.D. '92, Albuquerque, N.M., an internist practicing as a hospitalist, was elected a fellow of the American College of Physicians – American Society of Internal Medicine, the society of internists. This distinction recognizes achievements in internal medicine, the specialty of adult medical care. Medical director of the Clinical Thrombosis Center at Lovelace Health Systems, he is also clinical assistant professor at the University of New Mexico Health Sciences Center, where he is currently teaching a course in clinical thrombosis. After earning his M.D. degree from Penn, Spyropoulos completed his residency at the University of New Mexico Health Sciences Center.

Elisa K. Ross, M.D. '96, has joined Healthcare for Women Only, a practice in Pottstown, Pa.

OBITUARIES

Hart Edgar Van Riper, M.D. '30, Indianapolis, a retired pediatrician who helped shepherd the development of polio vaccines; November 4, 2000. Beginning as a pediatrician and medical director of an insurance company in Madison, Wisc., he then joined the Children's Bureau of the Labor Department in Washington, D.C. In 1945, he moved to the National Foundation for Infantile Paralysis, the forerunner of the March of Dimes Birth Defects Foundation, where he served as medical director. He played a central role as liaison in the development of the Salk vaccine and the Sabin vaccine, which were underwritten by the Foundation and the United States Public Health Service. Van Riper then became medical director and vice president for medical affairs of Geigy Pharmaceuticals in Ardsley, N.Y.

Henry K. Erwin, M.D. '33, G.M. '35, Allentown, Pa.; April 11, 2000. He interned at St. Luke's Hospital, Fountain Hill, Pa., and completed residency programs in ophthalmology at Penn from 1934-35 and Will's Eye Hospital 1935-37. Appointed to St. Luke's Medical Staff in 1948, he rose to chief of the ophthalmology section before retiring.

I. Edward Rubin, M.D. '35, G.M. '46, Philadelphia, December 11, 2000. After completing his internship at Mount Sinai Hospital in Philadelphia and his residency at Willard Parker Hospital in New York, he opened a family medicine practice. He later returned to Penn's Graduate School of Medicine to study ophthalmology. A former clinical associate professor of ophthalmology at the Graduate School of Medicine, he also was associated with Graduate Hospital.

James N. Stanton Jr., M.D. '37, Naples, Fla., a retired obstetrician-gynecologist; April 13, 2000. He served as president of the medical board of the Western Pennsylvania Hospital from 1965 to 1968 and then as the hospital's medical director from 1973 to 1977. He received the hospital's Gold Headed Cane Award in 1969, given to someone with exemplary qualities as a physician, teacher, and researcher. During World War II he served as captain of the West Penn Hospital Unit, which was stationed in England. He also traveled as staff physician for the Irving Berlin stage revue "This is the Army," which toured to raise the morale of the troops.

Paul Strassburger, M.D. '39, Little Silver, N.J., June 1, 2000. He started his medical career at Columbia Presbyterian Hospital in New York City, then practiced at Mountainside Hospital in Glen Ridge and St. Barnabas Medical Center in Livingston. He had been the chief orthopaedic surgeon at Overlook Hospital in Summit, specializing in hip replacements, and was medical director at Orthospec, Inc., in Spring Valley, N.Y., for three years before retiring in 1985. He served in the Navy during World War II.

William H. Keffer, M.D. '40, Wyomissing, Pa., a retired physician; September 23, 2000. At Reading Hospital, he served as president of the directing staff in the 1960s and later as senior physician. During the Second World War, he was a major in the Army Medical Corps in New Guinea, the Philippines, and Japan. He completed his residency at the Mayo Clinic in Rochester, Minn. A fellow of the American College of Physicians, he was elected to the College of Physicians of Philadelphia.

Harry M. Klinger, M.D. '41, Longboat Key, Fla., former chief of staff of general surgeons at Geisinger Medical Center in Danville, Pa; November 10, 2000. He served with the Military Medical Services in Japan for two years.

Harold N. Cole Jr., M.D. '42, Daphne, Ala., a retired dermatologist; May 25, 2000. During World War II, he served in the Army Medical Corps, primarily in the South Pacific, and received the Purple Heart. After completing his residency at Bellevue Hospital in New York City, he rose to associate clinical professor at Case Western Reserve University. He was elected vice president of the American Academy of Dermatology in 1971. After retirement, he served as an elder for the Spanish Fort Presbyterian Church.

Paul G. Eglick, M.D. '42, Bethayres, Pa., a retired pediatrician; September 15, 2000. He served his internship at Jewish Hospital, now the Albert Einstein Medical Center, and his residency at The Children's Hospital of Philadelphia. During World War II, he was a battalion surgeon and a paratrooper with the 82nd Airborne Division.

Eugene E. Laigon Sr., M.D. '45, Coaldale, Pa.; July 14, 2000. He was a physician in Coaldale for more than 50 years, serving as chief of internal medicine at the former Coaldale State General Hospital. A former president of the hospital's medical staff, he had also been president of the medical societies of both Carbon County and Schuylkill County. He was an Army veteran of World War II.

William Barba II, M.D. '46, Jenkintown, Pa., former acting dean and vice president of Temple University School of Medicine; May 20, 2000. He did his internship at Pennsylvania Hospital, followed by his pediatric residency at the University of Illinois Research and Educational Hospital. A former chief of pediatrics at Roxborough Memorial Hospital, he served as director of medical education at United Hospitals of Newark. In his 25 years at Temple, he was a professor, associate dean, acting dean, associate vice president for affiliated hospitals, and executive director of Temple's North Philadelphia affiliates. He retired in 1987. A former president of the Philadelphia Blood Center, he also served as an examiner for the American Board of Pediatrics.

Wade Rizk, M.D., G.M.E. '46, Jacksonville, Fla.; July 4, 2000. For 40 years, he served Jacksonville in various medical positions. He was director of the Department of Radiology at St. Luke's Hospital for a decade. A former president of the Northeast Florida Radiological Society, he had also been president of the Duval County Medical Society. In the 1960s, he was a pioneer of radiation oncology in Florida.

Lyle S. Powell, M.D. '47, Walnut Creek, Calif., an ophthalmologist; April 8, 2000. After serving in the Army during the Korean War, he began his practice in Walnut Creek. One of the founders of the John Muir Medical Center, he had also served as chief of staff and board member. He built and raced cars for 10 years, then became a pilot. A member of Chapter 393 of the Experimental Aircraft Association in Concord, he built and flew three aircraft of his own.

Richard A. Dillard, M.D. '48, Birmingham, Ala., November 8, 2000. He did his internship and surgical training at the University of Alabama at Birmingham, then became chief of surgery at the Veterans Hospital in Birmingham for three years. In his private practice, he performed thoracic, vascular, and general surgery. During the Korean War, he served a combat tour with Destroyer Squadron 16. A founder of the board of directors of Brookwood Hospital. He was a founder and former president of the Mountain Brook Swim and Tennis Club. Inducted into the Alabama Tennis Hall of

Fame in 1989, he served as president of the Alabama Tennis Association.

Harvey O. Randel, M.D. '48, San Diego, October 25, 2000. A former U.S. Navy physician, he was stationed with NATO forces in Naples, Italy before being assigned to the Naval Hospital in San Diego in 1956. He did his fellowship in allergy and clinical immunology at Scripps Clinic and Research Foundation. He was promoted to commander in 1959, began his civilian medical career in 1962, and remained in the Naval Reserve until 1974. Founding president of the San Diego Allergy Society, he also had served as president of the San Diego County Medical Society, the Lung Association of San Diego County, and the Western Society of Allergy and Immunology. From 1974 to 1979, he was a trustee of the California Medical Association. Twice elected president of the Retired Officers Association, he also served on the boards of Meals on Wheels and was treasurer of Project Life, which provided housing and rehabilitation services.

Henry K. Reemtsma, M.D. '49, emeritus professor of surgery at Columbia University School of Medicine and pioneer in xenotransplantation; June 23, 2000. After taking his surgical residency at Presbyterian Hospital in New York, he served as a U.S. Marine Corps surgeon in the Korean War. In 1957, he joined Tulane University as an assistant professor of surgery. At Tulane in 1963 and 1964, he performed historic transplants of chimpanzee kidneys into humans. After a brief stint at the University of Utah's School of Medicine, he joined the faculty of Columbia University in 1971, eventually serving as chair of the Department of Surgery, as the Valentine Mott Professor of Surgery, and as the Johnson & Johnson Distinguished Professor of Surgery. A member of the Institute of Medicine of the National Academy of Sciences, he was president of the American Association for Thoracic Surgery and chairman of the American College of Surgeons. A former president of the Society of Clinical Surgery, he also served as chairman of the New York State Transplant Council and as First Vice President of the American Surgical Association. He was coauthor of *Xenotransplantation: The Transplantation of Organs and Tissues Between Species* (1991) and was editor of two series of books. In 1999, he was the representative of the Class of 1949 at Penn Med's graduation ceremonies.

John W. Harrison, M.D. '50, Ridgefield, Wash., a retired physician; November 7, 2000. He completed his training in internal medicine at the Cleveland Clinic. During the Korean War, he served as chief of medical service at the 2500th Air Force Hospital on Long Island, N.Y., and received a Commendation Medal for Meritorious Service. An assistant clinical professor at the University of Washington Medical School, he was a former president of the Northwest Rheumatism Society and a fellow of the American College of Physicians. His wife **is Mary T. Harrison**, M.D. '50.

Barry J. Schwartz, M.D. '54, Villanova, Pa., psychiatrist; April 25, 2000. He had been on the staff of the Institute of Pennsylvania Hospital, where he completed his residency, and he had an office at Introspect Clinic in Lansdale. In 1975, he and **Laurence H. Snow**, M.D., G.M.E. '62, published a study on failure, in which they identified eight failure-prone character types and the qualities that cause them to fail. A former dean of the Philadelphia Psychoanalytic Academy, he had once been president of the Philadelphia Society for Adolescent Psychiatry.

Angel E. Enriquez, M.D., G.M. '55, a professor of otolaryngology at the University of the Philippines and at the University of the City of Manila; April 3, 2000. He cofounded the Philippine Society of Otolaryngology and later served as its president. One of the authors of the *Philippine Textbook of Otolaryngology*, he was the first editor of the *Philippine Journal of Otolaryngology* (1981-89). He also served for several years as president of the Philippine Board of Otolaryngology.

Gerald L. Haidak, M.D., G.M. '55, Pittsfield, Mass.; April 30, 2000. He had been in the departments of Surgery and Cell Biology at the University of Massachusetts Medical Center.

Eugene I. DiSalvo, M.D. '57, G.M.E. '62, Bethlehem, Pa.; April 29, 2000. He served his internship in general surgery and his residency in orthopaedic surgery at HUP. He was a captain and chief of orthopaedic surgery in the Rodriguez United States Army Hospital from 1962 to 1965. That same year he affiliated with Easton Hospital. There, he served as chief of orthopaedic surgery (1984-2000); chair of the credentials committee; president of the medical staff (1994-98); and chair of the executive committee (1995-98). He also maintained a private practice from 1965 until his death. He was a fellow of the American Academy of Orthopaedic Society and of the American Back Society.

Bernard Sigel, M.D., G.M.E. '58, Philadelphia surgeon; December 26, 2000. He emigrated from Poland during the Second World War. Known for advancing the use of ultrasound imaging, he spent most of his career at the Medical College of Pennsylvania, where he had been dean and acting president. In 1974, Sigel left MCP to become dean of the University of Illinois College of Medicine. Back at MCP, he served as chair of surgery from 1985 to 1989. He belonged to several professional associations, including the American Institute for Ultrasound Medicine, from which he received a Lifetime Achievement Award in 1999. He also received an honorary doctorate from the University of Paris.

John S. O'Brien, M.D. '59, a Punta Gorda, Fla., psychiatrist; May 3, 2000. After completing his residency at the Institute of Living in Hartford, Conn., he opened a private practice in St. Petersburg in 1965. Ten years later, he established the Feedback Center for pain diagnosis and management. He later served as senior physician for the Willough at Naples, Fla., a center for alcohol and drug addiction and eating disorders, and as medical director of Al Amal Hospital in Damman, Saudi Arabia. A former member of the District Mental Health Board of St. Petersburg, he was a founding board member of the Developmental Center, a non-profit agency for children with learning disabilities.

Felice J. Santore, M.D., G.M. '60, Rosemont, Pa.; January 5, 2001. A graduate of Temple University School of Medicine, he worked as an internist for 13 years before enrolling at Penn for training as a surgeon and otolaryngologist. He had been president of the medical staffs at Fitzgerald Mercy Hospital and of Misericordia Hospital. He was a member of the senior medical staff at Lankenau Hospital before retiring in 1985.

Jeffrey W. Berger, M.D. '92, Ph.D., Cherry Hill, N.J., assistant professor of ophthalmology at the University of Pennsylvania School of Medicine; January 25, 2001, of cancer. He also earned his Ph.D. degree in biophysics from Penn. After a residency at the Massachusetts Eye and Ear Infirmary, he came to Penn's

Scheie Eye Institute as a fellow in vitreoretinal diseases in 1996 and joined the faculty the following year. A retinal specialist, he served as chief of the retina service at the Philadelphia VA Medical Center and was principal editor of a medical textbook, *Age-Related Macular Degeneration* (1999). He founded and directed the Computer Vision Laboratory, which was funded in part by a Career Development Award from Research to Prevent Blindness, Inc., and in part by the National Eye Institute through his Mentored Clinician-Scientist Award. Berger was also principal investigator of the Reading Center for the NEI-funded Complications of AMD Prevention Trial. As a teacher, he had won the Department of Ophthalmology's Golden Apple Award.

FACULTY DEATHS

Lester Baker, M.D., professor of pediatrics at The Children's Hospital of Philadelphia and director of Penn's Diabetes Research Center; September 17, 2000. He received his M.D. degree from Columbia University and joined Penn as an assistant professor of pediatrics in 1966. Ten years later, he was promoted to professor. He was a principal investigator for a 10-year study, the Diabetes Control and Complications Trial, and helped show that rigorous control of blood-sugar levels can dramatically cut down serious complications of diabetes. In 1994, he was honored as an outstanding clinician by the American Diabetes Association. Author of more than 100 original articles, he cowrote the book *Psychosomatic Families: Anorexia Nervosa in Context* (1978).

Jeffrey W. Berger. See Class of 1992.

Harry M. Burros, M.D., emeritus associate professor of urology in surgery and former president of the medical board of Graduate Hospital; August 29, 2000. He came to Penn in 1956 as an associate professor of urology. In 1978, he became a clinical associate professor of urology in surgery and held that post until he became emeritus in 1993. At Graduate Hospital, he was chairman of the urology department for more than 30 years. He also was a staff member of Underwood-Memorial Hospital.

William W. Chambers, Ph.D., emeritus professor of anatomy; September 19, 2000. After earning his doctorate at Vanderbilt University, he joined Penn in 1947. He became a noted teacher and researcher of the central nervous system and was instrumental in the reorganization of the course in neuroanatomy for first-year students. He also helped found the Institute of Neurological Sciences in 1953, one of the first such groups in the United States organized to stimulate multidisciplinary study.

Howard Pollack, M.D., emeritus professor of radiology and urology; September 20, 2000. Internationally known for his pioneering work in using lithotripsy to crush kidney stones, he helped develop the use of imaging techniques such as ultrasound to diagnose and treat diseases of the urinary and reproductive systems. After earning his medical degree from Temple University, he served as chairman of radiology at Episcopal Hospital before joining Penn in 1977. Author of more than 200 scientific papers, he wrote *Clinical Urography*, considered the definitive textbook for the specialty. He served on editorial boards of more than a dozen medical journals and helped found the Society of Uroradiology.

Following Andrew's Example

Ferdinand G. Weisbrod, M.D. '42, G.M. '50, remembers reading about the life of the industrialist/philanthropist Andrew Carnegie during his undergraduate years at Penn. He never forgot Carnegie's personal philosophy about wealth: Give money to your children but "don't overdo it – too much money can make them soft and non-productive." Instead, Carnegie advised, leave most of your wealth to philanthropy.

"I decided then that if ever I achieved some sort of wealth that I would present it to the University – the place that was so important to me in finding my place in the world," says Weisbrod.

Throughout the next six decades, Weisbrod married, had three children, and embarked on careers in medicine and real estate. A combination of timing and talent led to his switch from medicine to real estate. In the early 1970s, problems with the family real estate holdings led Weisbrod to try his hand at the field. He figured he could do a better job of managing the properties than the professionals. He was right. What began as a side job eventually became an all-consuming second career; taking advantage of a booming real estate market, he eventually acquired 35 properties. Then, in December, he created two charitable remainder trusts that will ultimately fund a professorship in the School of Medicine's Division of Gastroenterology, his original field of interest.

"There are so many exciting things happening in medicine today," he says. "The pace of discovery is accelerating all the time."

Weisbrod's generous gift also serves him well. In addition to obtaining a generous current income tax deduction, he will receive a lifetime income stream from the charitable remainder trusts.

In his philanthropy, Weisbrod also hopes to impart the lesson he learned from Carnegie. "I think it's important to steer all Penn graduates toward a policy of giving gifts to the University, rather than to Uncle Sam – and also to avoid giving too much to your children," he says. "Money can create more problems than it solves. But the gifts to the University are going to solve problems."

Weisbrod's planned gift is just one of the creative gift opportunities that would benefit both the School of Medicine and its alumni. As you chart your financial futures, the Planned Giving Office at the University of Pennsylvania Medical Center is ready to assist in developing the appropriate strategy for you. ***Contact Marcie Merz, J.D., director of planned giving, University of Pennsylvania Medical Center, 3535 Market Street, Suite 750, Philadelphia, PA 19104-3309. E-mail: mmerz@ben.dev.upenn.edu.***

Among Dr. Garret FitzGerald's many roles are chairman of Penn's Department of Pharmacology, professor of cardiovascular medicine, director of the Center for Experimental Therapeutics, advocate of collaborative science, champion of translational research, mentor, runner of marathons, voracious reader, writer of elegant columns in his department's newsletter – and chair of the American Heart Association's Council on Arteriosclerosis, Thrombosis, and Vascular Biology. Although he says he's spent more than 20 years working in one biochemical pathway, his research touches on such hot topics as COX-2 inhibitors, antioxidant vitamins, and the effects of alcohol.

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