PENN MEDICINE

UNIVERSITY OF PENNSYLVANIA MEDICAL CENTER ■ FALL/WINTER 2000

Gene Therapy to the Rescue?

ROBERT ROSS, PRAGMATIST

"THE JUST WRATH OF GOD"

PRIORITY: FINANCIAL AID

Degrees of Danger

How serious are the threats to academic health centers in the new decade? Are the occasional forecasts of doom justified? Are even prestigious, long-established institutions like Penn in danger because of volatile market forces, shifting government policies, stingy HMOs, the burdens of indigent care, and rising costs? In October, David Blumenthal, M.D., M.P.P., visited Penn to present "Academic Health Centers: Behind the Rhetoric." With a title like that, one might expect some skepticism on his part. Indeed, he noted at the start of his talk at Penn's Leonard Davis Institute of Health Economics that he has found "a kind of ideological or even religious fervor" when some people talk about the status – and future – of AHCs.

Blumenthal wears many hats. A professor of medicine and of health-care policy at Harvard Medical School and director of the Institute for Health Policy at Massachusetts General Hospital/Partners HealthCare System, he is also executive director of the Task Force on Academic Health Centers of the Commonwealth Fund, a private foundation that supports independent research on health and social issues.

For the last two years, said Blumenthal, AHCs have faced the effects of continued price competition and of the Balanced Budget Act of 1997, which sharply reduced what they received from Medicare. In 2000, he said, "managed care has lost some of its bite" and the Balanced Budget Act is in constant revision, but he expects them both to have an impact for the next five years. For hospitals, the big change came mid-decade. After operating margins for teaching hospitals peaked at 4.0 to 4.5 percent in 1995, they began to drop. In 1999, they hit "historic lows," at about 1.5 to 2.0 percent – as Blumenthal noted, probably too low for institutions to continue to sustain innovation, improvements, etc. "This was not a uniform phenomenon," he emphasized; most teaching hospitals, in fact, continue to make money, especially those independent of medical schools. Yet when the Commonwealth Fund's task force recently surveyed the 20 AHCs that received the highest funding from the National Institutes of Health, 14 of them had negative operating margins, a downgrade from a bond-rating agency, or a "negative outlook" from a bond-rating agency. Two of the 20 would not share their data, so the figures are even more striking.

Blumenthal briefly cited several instances of financial distress among AHCs, including Penn. Some affiliated hospitals have been sold, including those at Tulane and George Washington University. Beth Israel Deaconess Medical Center, he said, "is not out of the woods yet." Still, "all this needs to be kept in perspective," he added. In the previous decade, there was what he characterized as "an enormous increase" in the size of faculty, especially on the clinical side. After "overexpansion," wasn't it natural to expect contraction? Blumenthal also mentioned "unprecedented increases" in research budgets and "real increases" in medical-school faculty salaries throughout the past decade. Today, in contrast, Blumenthal sees "a general effort on the part of society" to downsize, and the situation is no different with AHCs. Despite many commonalities among AHCs, Blumenthal also noted that there were also some regional differences – for example, AHCs in the south have generally been much less affected by managed care.

As for the missions of AHCs, Blumenthal found "an inverse relationship" between managed care and research. In areas with high HMO penetration, clinical faculty had fewer publications, the rate of growth in NIH awards has been lower, and intra-institutional funding has dropped significantly.

Studies from Georgetown University have found that charity care is "disproportionately high" at AHCs; again, the rate is higher in areas highly penetrated by managed care. Similarly, specialized care at AHCs has increased disproportionately, and the teaching hospitals have absorbed more transfers of sicker patients who are more costly to care for.

But it hasn't all been bleak in the last several years. Blumenthal reported that a strong stock market and increases in philanthropy "to an unprecedented degree" have helped buoy AHCs. In summary, he asserted that the financial health of AHCs did deteriorate in the late 1990s – but between two-thirds and three-quarters of AHCs still have positive operating margins.

A member of the audience asked whether bad management played a role in the financial distress experienced by many AHCs. Blumenthal was doubtful, suggesting that the pressure of having to perform was likely to force out weaker managers. In addition, although it is difficult to measure the quality of management, he felt it was unlikely to differ greatly from one institution to another.

Blumenthal was also asked about "sustainable" operating margins for AHCs. "What my boss would tell you is that more is better!" he replied. At Partners, the goal is about 3 percent, which Blumenthal called "a pretty minimal level." Institutions that are heavily involved in research and teaching "probably should be allowed to do more than crawl along," he said, adding that it does not make sense to pour money into research and education – and let clinical services "atrophy." Perhaps part of the answer, he said, is to "have fewer academic health centers to support."

Cover: Katherine A. High, M.D., professor of pediatrics. Photograph by Robert H. Clink.

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Address all correspondence to John Shea, **Penn Medicine**, 2018 Penn Tower, University of Pennsylvania Medical Center, Philadelphia, PA 19104-4385, or call (215) 662-4802, or e-mail john.shea @uphs.upenn.edu.

Tommy Leonardi

At an employee-appreciation event to celebrate the Health System's progress in dealing with its financial problems, Robert D. Martin, Ph.D., interim CEO, handed out bags of goodies to (left to right) Jill Sheridan, Lisa Monterosso, Cecile Johnson, and Rita Ricks.

In progress: A remarkable recovery

In mid-September, after the executive committees of both the University of Pennsylvania Health System and the University trustees reviewed the financial figures for Fiscal Year 2000, UPHS released them publicly. For the fiscal year that ended on June 30, 2000, the Health System's operating loss was $30 million. In their memo, Robert D. Martin, Ph.D., interim CEO of the Health System, and Arthur K. Asbury, M.D., interim dean of the School of Medicine, noted that they were "pleased to report on the remarkable financial improvement."

Their pleasure is easily understood: As *The Philadelphia Inquirer* put it in an article called "Penn system is recovering much faster than expected," UPHS has shown "a dramatic turnaround" (September 15, 2000). The Health System, reported the *Inquirer*, "slashed its operating loss by $168 million last year and is expected to return to profitability in the current year." The *Inquirer* quoted Mark V. Pauly, Ph.D., a nationally known professor of health-care systems at Penn's Wharton School, on the UPHS turnaround: "A year ago, I would have said that would be very hard to do."

It was indeed very hard to do, as Martin conceded to the *Inquirer*: "It has not been easy. No person in this organization has been untouched by this initiative."

The Health System's operating loss of $30 million "is by no means a negligible sum," wrote Martin and Asbury in their memo, "but, compared to last year's figure of $198 million in operating losses, it represents significant financial progress." Martin and Asbury credited the combined efforts of staff, faculty, and management: "The road ahead will not be an easy one, but the kind of cooperation, dedication, and hard work that sustained us in the past fiscal year will carry us through FY 2001." In September, the Health System held a modest celebration in Miller Plaza to salute its employees "for coming through in the crunch."

According to the *Inquirer*, UPHS "achieved its turnaround primarily through cost cuts," citing the 20 percent cut in the workforce and several other moves: reorganization of purchasing to get better prices through bidding and volume discounts; more economical use of clinical resources; elimination of the health and disease management program, which only a couple of years earlier had been one of the most celebrated initiatives throughout the Health System; the merger of a number of departments to reduce administrative overhead; outsourcing of food services and housekeeping services; the sale of several physician practices in Clinical Care Associates, the Health System's primary-care network, as well as the termination of some contracts; and deferral of some capital projects.

The Health System's recovery-in-progress has been noted in other parts of the country as well. In an article in *Crain's Detroit Business* on financial developments at the Detroit Medical Center, the publication spoke with Elizabeth Sweeney, director of public finance ratings for Standard & Poor's, the bond-rating agency: Sweeney said the performance of the Detroit Medical Center "ranks . . . with a comeback executed recently by the Philadelphia-based University of Pennsylvania Health System."

Search begins for new CEO/dean

The search to find the most qualified person to lead the University of Pennsylvania Health System and the School of Medicine began in earnest in September when Judith Rodin, Ph.D., president of the University of Pennsylvania, and Robert L. Barchi, M.D. '72, Ph.D., provost, announced the formation of a committee to advise on the search. Citing the "great importance" of the committee to both the University and the Health System, Rodin and Barchi noted: "Because the combined dean/CEO job will involve both academic and administrative responsibilities of the highest order, we have asked several of our most renowned faculty and University officers to serve on the committee."

Heading the committee is Dwight L. Evans, M.D., the Ruth Meltzer Professor of Psychiatry who serves as chair of the Department of Psychiatry. In addition to members of the faculty of the School of Medicine, the committee includes a distinguished alumnus, Michael S. Brown, M.D. '66, the Paul J. Thomas Professor of Medicine and Genetics at the University of Texas Southwestern Medical School and recipient of the Nobel Prize in Medicine in 1985; a present dean and a former dean of schools at the University of Pennsylvania; a member of the boards of trustees of both the University and the Health System; and two current medical students.

According to Rodin and Barchi, "Academic medical centers like ours face enormous challenges today. This is unquestionably a key search for the University."

In November, Evans issued a memo after the committee's first meeting with the University's top administrators. Rodin and Barchi, he

noted, "emphasized the importance of appointing an innovative and energetic CEO/dean with a vision to chart a future course for continued excellence in these two areas." He also solicited the views of all members of the Health System and the School of Medicine. The committee is particularly interested in comments and ideas regarding the major criteria upon which the selection of a CEO/dean should be made, the mission and short- and long-term goals of the Health System and the School of Medicine as they should be presented to candidates, and suggestions of outstanding candidates. The committee is seeking individuals "who possess a record of distinguished professional and scholarly achievement, the intellectual leadership and vision to guide the school in maintaining and strengthening its reputation for excellence in research, education, and clinical care, and the management experience to lead an academic health system that provides a full range of clinical services across the entire continuum of care."

Those interested in sharing their views should address their correspondence to Dwight L. Evans, M.D., Chair, UPHS CEO/Dean Search Committee, c/o Linda Koons, Office of the Provost, University of Pennsylvania, 110 College Hall, Philadelphia, PA 19104-6303. All correspondence with the committee will be held in confidence.

The University has also retained the executive search firm of Spencer Stuart to assist in this project. Paul Earle, who is coordinating the project, can be reached at (312) 321-8324, or at pearle@spencerstuart.com, or at Spencer Stuart, 401 North Michigan Avenue, Suite 3400, Chicago, IL 60611-4244.

Gelsinger family and Penn settle lawsuit

In early November, the University of Pennsylvania and the family of Jesse Gelsinger, the 18-year-old who died in a gene-therapy clinical trial at Penn in September of 1999, announced an agreement in a lawsuit brought by the family. According to a statement from both parties, "By mutual agreement, the amount of the settlement will be held confidential."

In September of this year, following the one-year anniversary of Jesse Gelsinger's death, the Gelsinger family filed a wrongful death suit against the University. The family alleged that the consent form signed by Jesse Gelsinger underplayed the risks of the experimental trial to correct ornithine transcarbamylase (OTC) deficiency, and that there were conflicts of interest and financial considerations that may have influenced the trial.

Named in the lawsuit were the University of Pennsylvania; The Children's Hospital of Philadelphia; Genovo, the biotechnology firm that funded the OTC clinical trial; and the Children's National Medical Center of Washington, D.C., where Mark L. Batshaw, M.D., who had been an investigator in the Gelsinger clinical trial, is now a faculty member. The individuals named were Batshaw, formerly at Children's Seashore House in Philadelphia; James M. Wilson, M.D., Ph.D., director of Penn's Institute for Human Gene Therapy and chair of the Department of Molecular and Cellular Engineering; Steven E. Raper, M.D., associate professor of surgery, another investigator in the trial; William N. Kelley, M.D., who at the time of the clinical trial was CEO of the University of Pennsylvania Health System and dean of the School of Medicine; and Arthur L. Caplan, Ph.D., director of Penn's Center for Bioethics.

The naming of Caplan in the lawsuit was widely considered a surprise, given that he had no direct part in the clinical trial itself. The Gelsinger family named Caplan because of his initial advice to the researchers framing the OTC trial: they had proposed enrolling infants with the OTC deficiency in the trial, but Caplan recommended enrolling relatively healthy adults. His argument was that the parents of the sick babies would be desperate, not in any position to give informed consent to the trial. According to the Gelsinger's lawyer, Caplan was also named because "he had some involvement in the writing of the informed consent document" that the family believes was misleading. "The informed-consent document in no way informed Jesse and his family as to the true nature of the risks," the lawyer told *The Washington Post* (September 19, 2000).

At the time the lawsuit was announced, the University issued a statement noting that "The anniversary of Jesse Gelsinger's death is a sobering moment for the University of Pennsylvania and everyone who was involved in the OTC clinical trial and Jesse's care. Our deepest sympathy is with the Gelsinger family at this very difficult time. . . .The complaint filed today, by its nature, tells only one version of a very complicated and painful story. . . . Throughout the last year Penn has readily acknowledged weaknesses in IHGT's monitoring and oversight of clinical trials. At the same time, the University continues to believe that these weaknesses did not contribute to Jesse's death, that his decision to enroll in the OTC study was based on full and fair disclosure of the relevant risks, and that his medical care met the highest standards."

As for the accusations of potential conflict of interest, the University stated that, like many other major research universities, it "is conducting a thorough review of its conflict of interest policies, but the University categorically rejects the notion expressed in the complaint that financial gain played any part in any aspect of the OTC trial." Wilson, who had equity in Genovo, stood to gain financially from the success of the gene-therapy trial. On several earlier occasions, however, Wilson denied that possible gain had influenced the structure and conduct of the OTC trial in any way.

When the settlement was announced in November, both Kelley and Caplan, "by mutual agreement," had been dismissed from the suit. For its part, the University expressed hope that the settlement will "enable Penn to concentrate on moving forward with its aggressive efforts to improve its oversight and monitoring of human subject research, an effort to which the University has already devoted substantial resources of time, energy, and money. Our goal is to establish – and to continually improve upon – a national model for clinical research and in this way honor Jesse Gelsinger's memory."

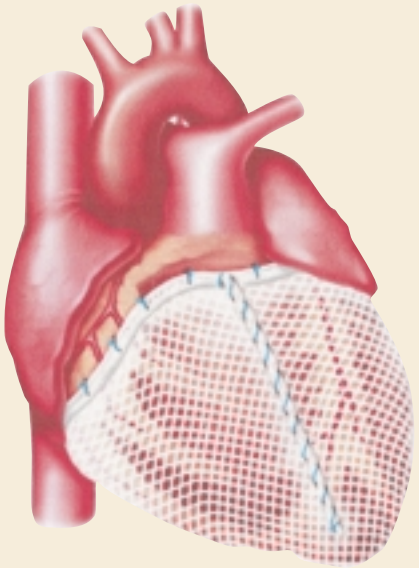
In its statement, the Gelsinger family asserted that the purpose of its lawsuit "was always to bring to the public certain critical issues concerning human participation in clinical trials in general, and gene therapy trials in particular. While the Gelsingers fervently hope gene therapy will one day be the means to cure many of the horrible diseases afflicting so many, they urge that the road toward this or any medical breakthrough is free of conflicts of interest, bioethical missteps, and inadequate government oversight. The Gelsingers appreciate that Penn, whatever its faults in the past, is taking seriously the need for research universities to improve the conditions under which clinical research is conducted. Penn has said it is staking out a leadership position on these issues, and that meant a great deal in resolving this case."

In related news, Genovo, which had funded about 20 percent of the budget of the Institute for Human Gene Therapy, was sold in August, thus ending its support of the institute. On the other hand, SmithKline Beecham, the pharmaceutical giant, announced in September that it would fund basic research at the IHGT. That would include animal tests but not human trials, which the University of Pennsylvania has ruled out at the institute itself. SmithKline Beecham did not announce the amount of the funding it would provide.

A jacket for the heart

A 41-year-old woman was discharged from the Hospital of the University of Pennsylvania after successfully undergoing the nation's first surgical implantation of a mesh-like "jacket" around her diseased heart. The purpose of the jacket is to constrain and support the heart muscle that shows the telltale enlargement due to cardiomyopathy. (The patient's leaking mitral valve was also repaired at the same time.) The jacket – known as the ACORN Cardiac Support Device – is delicately slipped around the heart and then stitched into place to prevent the muscle from further dilatation. Each ventricular-support jacket is made from specially designed polyester fabric that fits snugly around the exterior of each patient's heart. Surgical implantation is done through open chest surgery similar to what occurs during coronary-artery bypass grafts.

"It is our belief, based on extensive studies, that those patients in whom the 'jacket' is implanted will have improved heart function," said Michael A. Acker, M.D., the associate professor of surgery who led the surgical team. "If we can sustain the clinical improvement for an appropriate length of time, the heart jacket may prevent the need for transplantation in some patients." In fact, earlier animal studies showed that the device not only stabilized the heart but to some extent reversed the enlargement. Acker, who heads Penn's heart transplantation and mechanical-assist program, had previously taken part in a similar implantation procedure at a hospital in Germany.



The HUP procedure is the first multi-site clinical trial approved by the FDA and sponsored by ACORN Cardiovascular, Inc., manufacturer of the jacket. According to Acker, the nationwide trial is designed to assess the safety and effectiveness of the device in two randomized patient groups: those who are treated with the jacket and those who are treated without it. Serving with Acker as co-principal investigator on the Penn portion of the trial is Mariell Jessup, M.D., a cardiologist and associate professor of medicine.

LETTERS

ONE SIDE OF THE ISSUE

Please remove my name from your mailing list re *Penn Medicine*. You printed a very biased article re doctor-assisted suicide and you did not present the other side of the issue. This of course is a typical liberal method.

Ronald Herman, M.D. '61
Palm Coast, Fla.

*The editor repli*es: The article to which Dr. Herman refers was an excerpt in the Spring 2000 *Penn Medicine* from a new book on a controversial topic, *A Time to Die: The Place for Physician Assistance*, by Charles F. McKhann, M.D. '55, published by Yale University Press (1999). A sidebar to the excerpt described a talk given on the Penn campus by Arthur L. Caplan, Ph.D., director of the University's Center for Bioethics. In his talk, Dr. Caplan traced the origins of physician-assisted suicide and expressed his view that the movement has lost momentum. Caplan's disagreements with Dr. Jack Kevorkian were also cited.

Attracting grants

The University of Pennsylvania Cancer Center recently received a five-year, $26 million Core Grant from the National Cancer Institute (NCI), the largest that the University has ever received from the National Institutes of Health. Cancer centers funded by the NCI Core Grant are considered the centerpiece of the nation's effort to reduce morbidity and mortality from cancer. The University of Pennsylvania Cancer Center has been continuously funded by the NCI Core Grant mechanism since it was created by the National Cancer Act in the early 1970s. This year, Penn's grant received the highest possible status, with full approval and funding of its 13 research programs and 16 core facilities. In addition, the NCI again approved Penn's center for five more years as a Comprehensive Care Center. This designation reflects the Cancer Center's excellence in basic, clinical, and cancer-control research, as well as its commitment to translate its findings to benefit cancer patients and the community at large.

The University of Pennsylvania Cancer Center, recognized by *U.S. News & World Report* as the region's top cancer center, opened the Rena Rowan Breast Center in the fall. Encompassing an entire floor of the Penn Tower building, the new center is specifically designed and designated to treat women with breast cancer.

Another recipient of the NIH's largesse is Penn's Center of Research in Hyperbaric Oxygen Therapy. The center received an $8 million grant from the National Center for Complementary and Alternative Medicine to study complementary and alternative therapies for cancer. The five-year grant is one of only two designated in the country at this time.

Begun in 1968, Penn's hyperbaric center was used to study the physiological changes that occurred when humans penetrated into unusual environments – for example, when deep-sea divers became victims of the bends. Since then, it has developed from a research center to a specialty-care patient area for the treatment of a variety of diseases.

Four projects at Penn's center will examine the methods of action, safety, and clinical efficacy of hyperbaric oxygen therapy for the treatment of head and neck tumors. The first project will evaluate treatment outcomes for patients who have undergone laryngectomies. The second will examine the effects of hyperbaric oxygen on the growth of blood vessels and tumors. The third project will describe the effects of hyperbaric oxygen on cell adhesion and on the growth of metastatic tumor cells in the lung. The fourth will test the effects of elevated oxygen pressures on cellular levels of nitric oxide. ■

CLICK ON TO MEDICAL ALUMNI RELATIONS

The University of Pennsylvania School of Medicine welcomes you to its expanded website for alumni. At www.med.upenn.edu/alumni, you can update your address, find out about coming events and reunion plans, make a gift to the school, locate a classmate, peruse photographs of the most recent Alumni Weekend, and try out many other possibilities. If you can't be at Penn Med in person, try the virtual experience.

"Time" is good to the Medical Center

The theme of the loan exhibition of this year's Philadelphia Antiques Show was "It's About Time." On loan were grandfather clocks culled from both private and public collections. Along with the many various antiques on sale at the show, these noble clocks brought in thousands of people eager to pass the time in such pleasant surroundings. The principal fund-raiser for the Medical Center, the antiques show raised a record-breaking $670,000 for the Institute on Aging.

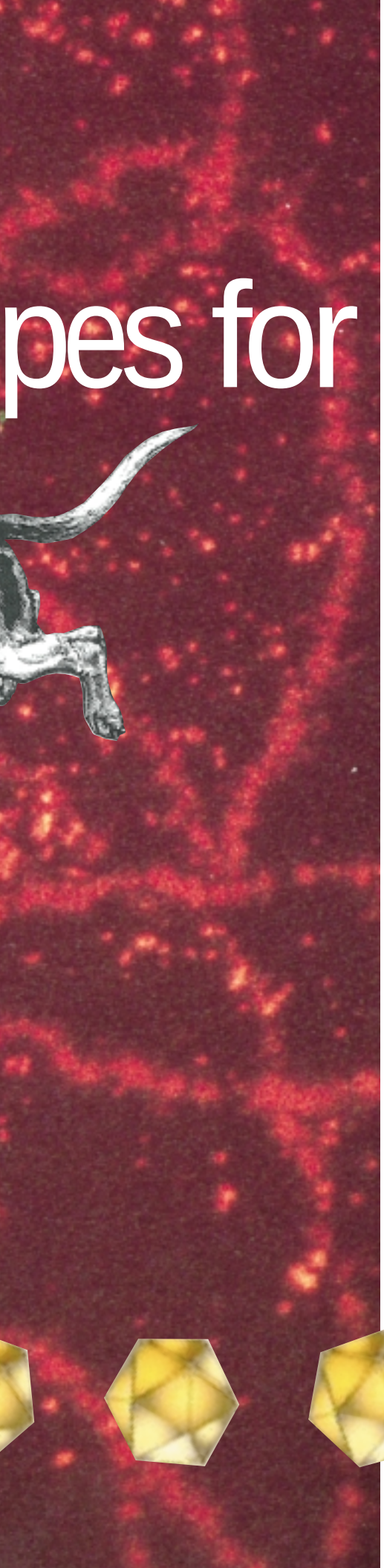
The proceeds from this year's show will be used to enhance and expand the institute's full range of geriatric care for the elderly of the Philadelphia area, primarily in renovations to the Ralston Penn Center clinical practice. These will include upgrading the exam rooms and medical equipment, establishing a clinic for sleep disorders for the elderly, setting up a resource center that allows patients and caregivers access to information on a variety of issues related to aging, and renovating the Acute Care for Elderly Unit at Presbyterian Medical Center.

Left: Tall-case clock, Johannes Spitter, Shenandoah County, Va., c. 1801. Collection of Museum of American Folk Art, anonymous gift.

Right: Tiered tall clock, maker unknown, U.S., c. 1880. Collection of the Museum of American Folk Art.

Since 1962, the Board of Women Visitors has raised more than $9 million through the Philadelphia Antiques Show to advance medicine and patient care at the Medical Center. The beneficiary of next year's show (April 7-11, 2001) will be the Department of Medicine.

High Ho



Katherine High's gene-therapy studies have successfully treated hemophilia in dogs. Now the challenge is to apply that technique to humans – and so far the prognosis is good.

pes for HemOphiliacs

by Lisa J. Bain

In January of 1999, a newspaper story about dogs caught the attention of Morgan Gethers, a 10-year-old boy in Plano, Texas. They weren't just any dogs. They were dogs with hemophilia, and what excited Morgan was the news that a group of Penn researchers, led by Katherine A. High, M.D., had successfully treated their blood disorder using gene therapy. "He was ecstatic," said Morgan's mother, Joel Gethers. "He thought it might be an opportunity for him to be a professional football player."

Joel Gethers was hoping that the promising research would alleviate the bitter disappointment her son had felt only months earlier when he attended space camp in Huntsville, Alabama. He had been thrilled when he won the "Top Gun" award, given to the best pilot of the entire camp, but his joy quickly vanished when he learned that because he has hemophilia, he could never be a pilot. "They said 'You can never be an astronaut because you're a bleeder,'" his mother recalled. It was the first time his condition had been "thrown in his face," she continued, the first time Morgan had been told so bluntly that "he couldn't do something."

Hemophilia B is a severe bleeding disorder caused by a deficiency in Factor IX, one of the proteins involved in blood clotting. The disorder affects about 2,800 men and boys in the United States. Hemophilia A, which is caused by a deficiency in a different clotting protein called Factor VIII, affects about five times as many people. Without sufficient levels of either of these clotting factors, people with hemophilia may experience uncontrollable bleeding, including spontaneous bleeding into the joints. As a result, children like Morgan are often restricted from playing sports or participating in other activities that could result in injury. Both types of hemophilia are X-linked genetic diseases: The genes for both Factor VIII and Factor IX are found on the X chromosome, which means that only males are affected. Females may carry the gene and experience milder symptoms, but they usually have a normal gene on their other X chromosome and thus produce enough factor to facilitate blood coagulation.

To control bleeding, people with severe hemophilia typically require weekly intravenous infusions of clotting factor concentrates. The cost can be as much as $100,000 per year. According to High, professor of pediatrics at Penn, the high

cost and need for long-term treatment mean that these factors are marketed predominantly in North America, Japan, and Europe. "Most of the rest of the world's hemophilia population does not have access to this kind of treatment and so they die in childhood or early adulthood." For High, whose research career has focused on the molecular basis of blood clotting, gene therapy in theory could provide life-long restoration of clotting function with just a single injection. Better still, that single injection conceivably could be delivered in even remote areas of developing countries.

Gene therapy encompasses a number of strategies, all of which involve transferring genes into cells in order to correct a genetic-based disease. The idea behind gene therapy is simple, says High; but like many things that are theoretically simple, putting the technique into practice has proved to be extraordinarily complex. First, the molecular basis of the disease must be understood before one can devise a genetic approach to correcting the problem. Then the questions become how and where to deliver the gene. Modified viruses are typically used as gene delivery vehicles, or vectors. Viruses have proved especially useful as vectors because they have evolved various strategies to enter cells and integrate their genetic material into that of the host cells.

Hemophilia represents an attractive system with which to demonstrate the potential of gene therapy. Scientists in the field theorize that inserting a single gene in only a fraction of the body's cells would produce enough factor to restore the clotting capacity. Equally important from a research standpoint, there are small- and large-animal models of the disease, which have allowed preclinical studies to be conducted.

To patients and families with hemophilia, the successful treatment of canine hemophilia was encouraging. Even more exciting, though, was a report published in March of this year: High and colleagues at Penn and elsewhere duplicated the dog

An Improved Vector?

The essential concept behind gene therapy is to treat disease by introducing new genes into a patient's DNA. To date, this goal has proved elusive because the tools for inserting genetic material into DNA, called vectors, have been limited by various factors. Until recent years, genetically re-engineered adenoviruses – the viruses responsible for colds – have come closest to success.

Reworked in the laboratory to carry the therapeutic genes and not to cause disease themselves, adenoviruses have demonstrated the ability to enter cells and insert their genetic payload into a recipient's DNA. Unfortunately, adenoviruses and the genes they carry are rejected by the immune system within a matter of weeks – about the same amount of time it takes to recover from a cold. This short amount of time may be acceptable for the acute treatment of many acquired diseases but is of little use for chronic diseases such as those caused by genetic deficiencies.

More recently, a significant new gene-therapy viral vector has been emerging from laboratories across the nation, including Penn's Institute for Human Gene Therapy. The new vector is the result of painstaking research and development efforts over the past several years. Like adenoviral vectors, the new vector is a re-engineered virus, in this case a virus called adeno-associated virus, or AAV. First noticed in the laboratory as a persistent impurity associated with preparations of adenoviral vectors, AAV was later found to be a very small, completely innocuous virus that relies on adenovirus for aspects of its life cycle, including reproduction – a kind of benign parasite to the adenovirus with no known impact on human health. Like adenovirus, re-engineered AAV is able to inte-

Robert Clink

Katherine High confers with some members of her research team: (l.-r.) Paris Margaritis, Ph.D.; High; Roland Herzog, Ph.D.; and Denise Sabatino, Ph.D.

grate therapeutic genes into a patient's DNA, but, unlike adenovirus, AAV appears to spark no significant response from the immune system.

At Penn, experimental studies with AAV vectors have shown much longer-term expression of introduced genes in mice and monkeys than was possible previously with adenoviral vectors. It has been described as a kind of stealth vector, in that it appears to evade any immune response. So far, AAV has performed well in terms of achieving stable and efficient gene expression in a number of animal studies. Katherine High's studies with hemophiliac dogs, which were conducted independently of Penn's Institute for Human Gene Therapy, offer hope that AAV will help take gene therapy another giant step forward.

– Franklin Hoke

trial in humans and demonstrated results similar to those observed in dogs. Although some press accounts focused on the fact that patients receiving the treatment produced Factor IX and that two of the three patients were able to control their disease with fewer doses of injectable factor, High cautions against overstating the importance of the work. The most significant results, as she sees it, were that from all measures, the treatment appeared to be safe and that it induced Factor IX expression in the muscle cells that received the vector. "In other words," she explains, "the animal studies were predictive of what we saw in humans. And that gives us confidence to move forward."

The feeling is shared by Haig H. Kazazian Jr., M.D., the Seymour Gray Professor of Genetics at Penn and chair of its genetics department. A renowned expert in the genetics of hemophilia, Kazazian calls himself "cautiously optimistic" about the implications of High's research. Her work, he says, raises "a lot of hope and optimism" both for people with hemophilia and for gene therapy itself. At a meeting this spring of the University of Pennsylvania Health System trustees, High presented a summary of her studies, which Peter G. Traber, M.D., called "really remarkable work." Traber, who was then the CEO and interim dean of the Health System, cited High as "a great example of a physician-scientist following the whole path" of her research.

It is not only scientists associated with Penn who have singled out High's work. *The New York Times* covered High's studies when the researchers announced results of a safety trial at the annual meeting of the American Society of Hematology (December 7, 1999) as well as after formal findings were published in *Nature Genetics*. Calling the results "encouraging," the *Times* also quoted a geneticist who said that High's team of investigators "are really close" to a major breakthrough. A new report from the American Association for the Advancement of Science, "Human Inheritable Genetic Modifications: Assessing Scientific, Ethical, Religious, and Policy Issues," cites her research on the first page of the introduction: "Very recently, researchers announced credible successes in improving patient health through gene therapy, perhaps signaling that years of research are about to bear fruit."

The promising results reported from High's laboratory could not have come at a better time for the field. After being accused in recent years of overselling the entire endeavor – among others, by Harold Varmus, then director of the National Institutes of Health – gene therapists next had to contend with severe criticism following the death of Jesse Gelsinger, an 18-year-old patient in a gene-therapy trial at Penn in September, 1999. "Gene therapy has been much in the news," High told the UPHS trustees. But it was not a time to retreat, she emphasized. "We are on the verge of some very exciting findings," she said, and the second decade of research "will be much more exciting than the first." (Besides the results of High's studies, another dramatic success was recently reported in France, where scientists used gene therapy to treat children with "bubble boy syndrome," a fatal immune system disorder.)

"One thing that has made gene therapy extraordinarily difficult to reduce to practice is that it involves a very wide range of expertise," says High. "People have to know how to design, characterize, and manufacture vectors; they have to know something about the immune response and about animal models of disease; they have to know how to interpret toxicology data. And they have to understand the pathophysiology of the disease they're working with."

High met these challenges by collaborating with a research team headed by Mark A. Kay, M.D., Ph.D., director of the Program in Human Gene Therapy at Stanford University; the biotechnology company, Avigen, Inc.; and clinical investigators at

both Stanford and The Children's Hospital of Philadelphia. In a field where competition is keen and can sometimes be cut-throat, this team has made significant advances fairly quickly through cooperation.

The collaboration made sense, says High, because she and Kay have complementary areas of expertise. He was trained as a geneticist with a long-term interest in liver-directed gene therapy and a strong background in the mechanism of gene transduction. High is a hematologist with a background in molecular biology and the molecular genetics of blood coagulation or clotting factors. "Over the course of years," she explains, "Mark and I developed a habit of sitting next to each other in meetings, because usually if there was something I didn't know about a vector, he knew it; and if there was something he didn't know about blood coagulation, I knew it. So we would trade notes back and forth. We both felt that we learned more trading notes than working alone."

The next step came in 1998. High's and Kay's research teams were working independently on gene-therapy strategies for hemophilia when High's corporate partner, Avigen, suggested that the two groups join forces. "The way I felt about it was, it's a hard problem and if you feel you can work with somebody it's better to work together than to compete," High recalls.

"It's funny because later somebody from a big pharmaceutical company came up to me and said, 'Why did you let them take Mark in? You were going to win!' But sometimes I feel that that attitude is wrong-headed. We're not doing this so *I* can win. We're doing this so that hopefully all these people like Morgan will one day have a better treatment available, and so all the people who right now aren't getting treated will have some other option."

High and Kay were both already using a virus called adeno-associated virus (AAV) as the vector carrying the corrective gene. At the spring meeting of the UPHS trustees, High noted that she had been working with AAV for about three years. In contrast, the vector used in the Penn clinical trials for ornithine transcarbamylase deficiency, in which Jesse Gelsinger was enrolled, was the adenovirus. (See "An Improved Vector?") High explains that AAV is a small, non-pathogenic virus that has proved especially useful as a gene-therapy vector because it can deliver genes efficiently to many different tissues and because it does not elicit a strong immune response from the host. Immune reactions to vectors have thwarted several other gene-therapy trials in recent years. The disadvantage of AAV is that its small size means that it can deliver only relatively small genes. To use AAV as a vector for gene therapy, scientists must remove the viral genes and replace them with the gene to be transferred.

Jude Samulski, one of the pioneers in developing AAV as a vector, had convinced High to try using AAV in her gene-transfer experiments while she was on the faculty of the University of North Carolina at Chapel Hill. (High came to Penn in 1992.) It was at Chapel Hill – site of the largest hemophilia center on the East Coast and home to a colony of dogs with hemophilia – that High cloned the gene for canine Factor IX. Following that accomplishment, said High, "We started to get interested in the question of whether we could use gene transfer as a way to treat hemophilia." Gene therapy for hemophilia would have to accomplish two things: first, sustained expression, since hemophilia is a lifelong disease; and second, expression at levels high enough to be therapeutic.

Kay had approached the problem from a different direction. At first, he said, he was just looking at hemophilia as a model. "I recognized early on that if we couldn't cure hemophilia with gene therapy, the other diseases would be even more difficult."

In methodical fashion, High began by perfecting the technique of gene transfer in tissue culture, then moved sequentially to mice, large animals, and finally humans. She would advance only after achieving success at each step. In a paper published in 1997, her team showed that following injection of the genetically engineered virus into the skeletal muscle of mice, circulating levels of Factor IX slowly rise, reaching a therapeutic level within about five to eight weeks. If this phenomenon could be repeated in humans, High reasoned, "it could change a boy from someone with severe hemophilia, bleeding into the joints and so forth, into somebody with mild disease who can play soccer and do most of the activities that little boys like to do, without needing treatment and without getting into trouble."

Joerg Schuettrumph, Ph.D., and Elina Armstrong, Ph.D., CHOP's Abramson Research Center.

Scaling up the research into a large-animal model was the next – and very critical – step. High was well aware that it has been the downfall of many other promising gene-therapy strategies. One of the obstacles is that large-animal models of human diseases are often not available. However, in the case of hemophilia, certain breeds of dogs have a naturally occurring form of hemophilia that closely resembles the human disease, both clinically and genetically. A second obstacle was that working with large animals requires the production of significant amounts of vector. That's where Avi-

gen came in.

High knew that a truly effective treatment for hemophilia would probably require the development of several different approaches. Both liver and skeletal muscles appeared to be good targets, but she felt she only had the resources to develop a single approach at first. Her reasoning was that, given the scant experience in using AAV in humans, a muscle trial would probably be safer because the gene transfer would be into peripheral tissue. Moreover, since many adults with hemophilia had been infected with the hepatitis

Robert Clink

pursue their research in Katherine High's laboratory at

virus back when the only available factor concentrate came from pools of blood donors, injecting the virus into their already damaged livers might create additional problems or prove ineffective. According to Roland Herzog, Ph.D., then a post-doctoral fellow in High's lab who played a major role in developing much of the pre-clinical data in animal models, no one knew for sure which approach would be safer. It was also unclear whether different approaches might be applicable to different population groups. But because the liver is where clotting factors are synthesized, says Herzog, "The liver probably would be the approach that would be most efficacious, where you could really cure the patient." (Herzog recently joined the faculty at Penn, as an assistant professor in the Department of Pediatrics).

While High and her team were perfecting the skeletal muscle approach, Kay was working on an approach through the liver. The two groups published back-to-back papers in *Nature Medicine* in January, 1999: High's demonstrated correction of hemophilia B in dogs that had received injection into the skeletal muscle, while Kay's demonstrated successful correction after injection into the liver of dogs. As High puts it, "That was the time we decided that we should just stop competing and work together."

Joining forces has proved not only remarkably successful, but unusually friendly as well. High attributes the success of the collaboration to the fact that "we are two really good groups and we have complementary expertise." She cites the "chemistry that really allows us to work together well. That's a fundamental aspect of productive scientific collaborations." High also praises the people at Avigen who have collaborated in the design and led the manufacture and the characterization of the vector.

As Kay sees it, the collaboration with High differs from many other collaborations because "it's more in-depth, more long-lasting, and more involved."

To the people who work closely with High, it is no surprise that she has been able to foster the spirit of collaboration. The atmosphere in High's lab at the Abramson Research Center "is probably the best I can imagine," says Herzog. "She's very good at picking people." That involves being conscious of what High calls "people's personality quotients." When recruiting scientists to work in the laboratory, she explains, "I think hard about what they've shown they can do in the lab and how they are going to fit into the group." To ensure productivity, "you have to have give and take."

In the meantime, the phase I trial continues. Over the next few months, two additional groups of patients will receive the vector at increasing doses. "Our goal is to identify a dose in which all the patients produce levels of Factor IX above one percent," says Catherine Manno, M.D., the principal clinical investigator of the study at The Children's Hospital of Philadelphia. "This could change their hemophilia to a milder form and make a real difference in their lives."

There are also plans to initiate a liver-directed trial, pending approval from the NIH's Recombinant Advisory Committee and the Food and Drug Administration. High sees both advantages and disadvantages to the liver-directed approach. One advantage is that lower doses are needed to achieve the same level of expression. But the liver approach is far more invasive, requiring that the vector be infused directly into the hepatic circulation under radiologic guidance. Says High, "What I think is probably going to work out best for the patient population is for us to try to develop both a liver-directed and a muscle-directed approach."

For families like the Gethers who have lived through the bleeding problems associated with hemophilia, the wait goes on. Joel Gethers said she has a sense that if anyone can conquer this disease, it's probably Katherine High. "She actually sees the human side of it," says Gethers. After reading about the dog study in the newspaper and seeing the hope reflected in her son's eyes, Gethers tracked down High through the Internet and wrote to thank her for her dedication and commitment. Part of Gethers's message read: "Even though only 2,800 or so men have this disease and in the big scheme that is such a small number, each one is someone's son, father, brother, or friend." It was a message that High has always taken to heart. ■

Lisa Bain last wrote for Penn Medicine *on new imaging technologies of the brain (Spring 2000).*

A Pragmatist o

f Public Health

By Linda Bird Randolph

After years of skillful advocacy and consensus-building, Robert Ross has become president of a philanthropic foundation.

Linda Bird Randolph, former editor of Penn Health Magazine, *is a free-lance writer and editor in Newtown Square, Pa.*

Robert K. Ross, M.D. '80, has studied what *doesn't* work in health care in order to learn what *does*. For years, he has been frustrated that many of the most obvious, feasible solutions to broad health-care problems – accessible preventive care, screenings, vaccines for the indigent, needle-exchange programs for addicts, and other types of outreach programs – cannot be adopted because of red tape or political resistance.

"I've seen the good, the bad, and the ugly" in health-care agendas, says Ross, who until this summer was the director of the Health and Human Services Agency for the County of San Diego, California. Many of the new ideas in public health seem to be rehashed old ideas that did not work, and Ross wonders why people keep reinventing the same system, expecting different results each time.

Ross's ambition was to repair San Diego's ailing health-delivery system. He had a simple goal: access for all San Diegans to high-quality health care at an affordable cost. But Ross knew he would not find the solution by imitating the processes adopted by other cities. San Diego, he says, is in a class by itself, and any plan would have to be customized to fit its diverse population and specific problems.

On the surface, the public health problems of San Diego County became someone else's concern in July, when Ross left his county post after seven years in office. That was when he became president and chief executive officer of the California Endowment, the state's largest health foundation. Established in 1996 as a private foundation by Blue Cross of California, the California Endowment maintains offices in Los Angeles, Sacramento, San Francisco, Fresno, and San Diego. Its mission is to expand access to affordable, high-quality health care for underserved individuals and communities and to promote fundamental improvements in the health status of all Californians – in short, a mission remarkably like the one Ross had in his previous position, only with a wider geographic reach. There are two important differences: with assets of about $3.7 billion, the foundation actually *gives out* money, granting approximately $200 million a year to organizations and institutions that directly benefit the health and well-being of the people of California; and Ross reports to a private board of directors instead of a county board.

San Diego County is the fourth most populated county in the nation – with 2.7 million people – and has an economy larger than Portugal's or Israel's. Size, however, is not the only thing that makes public health in San Diego so challenging. For one thing, 600,000 San Diegans are not insured, yet do not qualify for public assistance. More: thousands of San Diegans are enrolled in Medi-Cal, California's Medicaid system, yet many additional eligible people never apply and thus never get benefits. According to Ross, the county's thriving small-business economy "leaves many employers and employees priced out of the market for purchasing health coverage." At the other end of the spectrum, San Diego also has a substantial number of high-income residents

who are able to pay for health-care out of their own pockets, and there is a good supply of private clinics set up by benefactors.

Another complicating factor is immigration. As Ross puts it, "We are literally a border community." He cites a daunting figure: 6,000,000 border-crossings from Mexico a year. "We have both legal and illegal immigration issues which lead to a lot of people taking very low-wage positions with no benefits." And, as Ross emphasizes, anyone passing the border legally *or* illegally may bring infectious disease from Mexico and transmit it. When it comes to infectious disease, he believes that San Diego has more in common with Mexican cities like Tijuana and Baja than with neighboring California counties. If there is a hepatitis A or tuberculosis outbreak in Tijuana, it may have very important health implications for San Diego.

"Cross-border drinking" by teenagers has been another problem. Reports Ross, "Mexico has a legal drinking age of 18; ours is 21. It's been an annual rite of passage for teenagers in San Diego to want to celebrate on a Saturday night, on their 18th birthdays – or on their 16th birthdays – to drive into Tijuana, get drunk on tequila, and drive back across the border and end up in a fatal car crash. We engage Mexican health officials and law-enforcement officials and work on solving the problem. And it has been really gratifying to see a 30-percent reduction in those kinds of incidents" – a reduction, he says, because of increased awareness and publicity. Another positive result of the situation is that Ross and his colleagues developed a good relationship with Mexican officials. Ross, in fact, was co-president – with his Mexican counterpart – of a two-nation health council.

Soon after being named commissioner, Ross turned his attention to Medi-Cal, a managed-care system that integrates the public health department with full-risk, full-service health plans from the private sector. One of his overarching plans was to expand the program to many "Medi-gap" patients who earn too much money to qualify but who remain without coverage and are unable to purchase their own insurance. A corollary goal: to find ways to enroll qualified individuals who are unregistered – especially children – into existing programs. Ross has always seen prevention as the key to solving most social-health problems. In his view, expanding coverage translates into more access to childhood immunization, prenatal care, and programs to prevent substance abuse, violence, and AIDS.

Ross's plan for extending Medi-Cal coverage was simple. He planned to enroll what he calls "a broad coalition of health stakeholders," including consumer advocates, physicians, HMOs, community clinics, and the business community, in expanding coverage and helping solve the local health-care crisis. "We developed a multi-prong strategy to expand health-care coverage to 200 percent of the federal poverty level, which would provide coverage for another 200,000 San Diegans," says Ross. "There are no real extraordinary epiphanies or brilliant ideas in the plan. It is just putting together some practical and pragmatic approaches to getting people covered."

Why does Ross believe this plan has a better chance of succeeding? To some extent, it's a matter of politics. "We have this kind of coalition and support for the plan which makes it easier for elected officials to support." Such a coalition makes it more difficult for officials "to turn their backs on a problem if they're just hearing noise or discordance out there in the community." At the same time, "When you get a bunch of people who are in the same mode and

Public Health: A View from the Tren

Robert K. Ross, M.D. '80, was director of the Health and Human Services Agency of the County of San Diego from August, 1993, until this past July. Before that, he served as Philadelphia's commissioner of public health. In that time, he learned a lesson or two about trying to keep people healthy and get legislative support for his initiatives. On one of his return visits to the University of Pennsylvania Medical Center as the featured speaker at a celebration of generalist medicine, Ross shared some of his experiences and insights.

A Matter of Communication

A significant portion of our [medical] training is that we impact or hope to impact on the behavior of individuals in terms of their health behavior by handing them information. And if you give them enough information, give them enough data, you'll change their knowledge set and their knowledge base, and that will result in some change in their beliefs, that will change their attitudes, and that will result, hopefully, in a change of behavior. It is a very logical sequence.

The problem is that adolescents

Robert Clink

rowing in the same direction, it's easier for elected officials to support their strategy."

And there have been clear signs of success. Gary Stephany, president and CEO of the Healthcare Association of San Diego County, has worked with Ross in several different capacities. To Stephany, Ross is "Mr. Consensus." As Stephany puts it, "Being in the health-care business these days, there are all sorts of problems. But Bob has been able to bring all kinds of people together to the table to help San Diego become a healthier community." He singles out Ross's Healthy San Diego, which brought managed care to the Medicaid population. "There was much mistrust and animosity at first, but this has turned out to be a model program – a wonderful addition to San Diego."

Ross, he continues, "has been admired by his peers – and he has a lot of enemies, I'm sure, because he does manage to get what he wants. Bob is a firm believer in prevention, and he has been able to find ways to keep people out of the emergency room. This not only makes for a healthier community, but it saves money."

Another Ross supporter is Grantland Johnson, Secretary of Health and Human Services for the State of California. According to Johnson, San Diego County "is very politically variable – and conservative." Yet Ross was able to work effectively with his board of supervisors. Says Johnson, "Ross is very bright, very creative, very pragmatic, and politically very savvy – and he has a sense of vision." Most people, continues Johnson, "are trained by disciplines; we tend to view the world in a compartmentalized way. Ross is one of the few people I know who has been able to transcend his own training."

Last year, Ross was named one of *Governing* magazine's Public Officials of the Year, described as "a master consensus-builder in a notoriously fractured field." It spotlighted one of the initiatives he helped bring about, Project Heartbeat, through which 1,200 children are now receiving integrated mental-health services. (The ultimate goal is 13,000 children.) More national praise came in a 1999 release from the White House / Office of the Vice President about another initiative, Boost4Kids. "First proposed by Dr. Robert Ross of San Diego County at the Family Union Conference in Nashville, Tennessee, in June 1998," the initiative "is based on what San Diego County has been able to do." By cutting overhead, the county was able to realize "significant savings" and use the funds to increase the number of probation officers working with troubled children and their families and to fund 38 after-school programs.

Besides specific projects, Ross also looked at the overall picture during his tenure in San Diego County. In 1997, the county launched Project Synergy, an attempt to re-engineer all health and human services programs into a family-centered, neighborhood-based delivery system. The departments of Health and Social Services were functionally eliminated, replaced by six regional County Health and Human Services offices. As a result, according to the county's website, "public health nurses, social workers, and welfare workers no longer work for separate programs; instead, they work for a single, integrated regional team, whose customer is the family."

The five-year strategic plan for the county's Health and Human Services agency set five goals. For example, the first is "Healthy Behaviors and Lifestyles," which involves reducing the use of alcohol and drugs by all populations, as well as enhancing the residents' understanding of the haz-

ches

don't follow that very well. If I walk into a classroom of 8th graders, and I say, as the health director, "You shouldn't smoke cigarettes because it will increase the risk of cancer, heart disease and COPD or emphysema," they'll bob their heads and say, "O.K., I get it." And I will say, "Any questions?" And they'll say, "Yeah, Dr. Ross, when will *that* happen? When do we get heart disease?" "Well, I am not sure, maybe 30 or 40 years from now." So, all of a sudden, we've taken some very critical health information and knowledge and we've given that information to a 14- or 15-year-old, and they are asking questions about something that may or may not happen to them 20, 30, or 40 years hence – for someone who is not even thinking about their life span next *week*.

A relatively attractive female high-school student walks through a classroom door and says, "Well, I don't smoke cigarettes and I don't date men who smoke cigarettes because their breath stinks." Now, if you take *my* message and you weigh it against *her* message, whose is going to take better with a classroom of 8th graders? Who's got the training, who's got the knowledge, who's got the information? Well, I do. But whose *message* is going to have a better impact on that young person's behavior? And is that person from the community, are they culturally relevant, do they make sense speaking that language to that young person?

The Realities of Health Policy

My training is based on taking data and turning that data into information, which translates into some knowledge, which translates, hopefully, into some decision-making. The real world doesn't work like that, and the political world *certainly* doesn't work like that.

Continued on page 16

ards of smoking. Why smoking? "Smoking is known to be the leading preventable cause of illness and premature death in the nation." And the strategy is to stop the habit early. As the plan puts it, "The primary strategy for reducing adult smoking over time is to prevent the onset of smoking by youth, since 90 percent of smokers begin smoking before the age of 18." To achieve the goal, Health and Human Services has committed an array of alcohol and drug services, including prevention, treatment, and recovery, through a regional system of contracted services; increased the number of placements for individuals in need of alcohol and other drug-treatment and recovery programs; and reduced the waiting times for alcohol and drug treatment services. In addition, the agency will increase funding to community-based agencies and organizations to provide youth with tobacco education and smoking-cessation services.

Ross's interest in public health goes back to his youth. Of his childhood in the South Bronx, he says, "I was reared – socially and academically – in a disadvantaged inner-city environment." He started his undergraduate studies at the University of Pennsylvania, majoring in biology. He describes himself as frightened and overwhelmed by his course work – "a deer caught in the headlight." Still, he decided to follow the pre-med route and soon was floundering in calculus and physics.

"It was a different experience for me to get anything less than an 'A' up until that point," Ross recalls. He began to think about changing his major to international relations. At the time, he was a work-study student employed in the laboratory and office of Helen C. Davies, Ph.D., professor of microbiology and academic coordinator for the Department of Microbiology. As Ross recalls, "I vocalized my lack of confidence in myself to her that I could cut it.

"Now, Davies is about 5'3", and I'm about 6'2"," Ross says. "She got in my face and put her finger in my chest and said, 'You *will* become a physician. You can do it. Cut out all this bellyaching and whining.' She gave me the motivational kick in the rear that I needed to pursue the path."

Over the years, Ross and Davies shared what he delicately calls "many well-placed motivational sessions" while becoming lifelong friends. "She was the one who turned me on to medicine and public health in a meaningful way," he says. Davies, meanwhile, calls Ross "magnificent – and very, very special." She adds, "I could write a book about him, and probably should!"

Davies, in fact, feels she may owe her life to Ross. When Ross was a medical student, she and her late husband Robert, the Benjamin Franklin and University Professor of Molecular Biology at Penn and former chair of the faculty senate, invited Ross to go white-water rafting with them in West Virginia. It was


Tommy Leonardi

After a recent talk at Penn, Robert Ross chatted with David A. Asch, M.D., center, and Sankey V. Williams, M.D., G.M.E. '77.

My first entrée into that was when I was a health director at a school-based health clinic in Camden, N.J. I was fairly close to the executive director of the Camden Planned Parenthood Association, and she asked me if I would come up to Trenton and testify against some legislation that a state senator had sponsored. The legislation said, basically, that no school-based clinics in New Jersey can offer family-planning counseling. I sat there before I got my opportunity to testify, sat as the pro-life people and the Christian right and then there was the pro-choice people, the more left, liberal types, and everyone had their data and everyone had their recommendations, and there was arguing back and forth about whether this bill was good idea or a bad idea.

I was very interested in school-based clinics. I kept up on the literature religiously, and I knew all of the data. So when someone from the pro-life community got up in front of the state legislature and said, "We know that the school-based clinics do two things: they increase the rate of abortions, and they increase promiscuity in schools," I was outraged! There was no data that supported anything that he said, and I couldn't believe that he could just say that in front of those people and get away with it. But he did. And we got up, we gave our data, and I gave my information, and eventually, we defeated that bill.

The fact of the matter is – and one thing that I never remember learning anywhere in my training, even in this very fine institution – our health policy is driven by politics, and that is a very different world and the manner in which elected officials respond to information and how they make decisions is very different than anything that I was ever accustomed to in these hallowed halls. Clinical decision-making does not resemble in any manner, shape, or form political decision; it is quite different.

Perhaps what we need to do is to suggest for each medical-school class that as a prerequisite for graduation, they sponsor a piece of legislation. They would get a very interesting lesson in how to move a piece of legislation – either a local city ordinance, or state legislation, or federal legisla-

quite an adventure for Ross, who was just learning to raft.

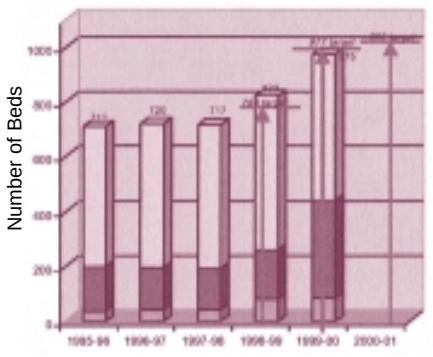
"The water was high and swift," Davies says. "We were just above a dangerous hydraulic when another raft rammed into us and we overturned."

The next thing Davies remembers, she was struggling underwater for what seemed like a long time. "I drank a lot of the river while submerged and I don't think I would have survived if Bobby hadn't pulled me onto a rock," she says – all the while Robert Davies worked vigorously to turn the raft right side up.

Another person Ross singles out is Samuel P. Martin III, M.D., the late professor of medicine at Penn and a former executive director of the Leonard Davis Institute of Health Economics who helped develop the Wharton School's M.B.A. program in health-care management. Say Ross, "He taught me a lot about the importance of playing politics well in order to *enact* sound policies."

After medical school, Ross received a United States Services scholarship. This allowed him to relieve some of his medical-school debt by working in a community health center in a poor neighborhood in Camden, N.J. "I worked there for five years," Ross says. "It was there that I became interested in community population-based health – and the advantages of wholesale medicine versus retail medicine, as they call it." From 1988 to 1990, Ross was a Robert Wood Johnson Foundation Clinical Scholar at Penn, where he studied government and its role in the health of urban children as well as school-based clinics and adolescent health.

Alcohol and Drug Services: Expansion of Residential Capacity



Source: San Diego County HHSA

In June of 1990, Ross joined the Philadelphia Department of Public Health and soon advanced to commissioner. He took an activist role, creating both the Division of Health Promotion and Disease Prevention and the Injury Prevention Program. In this role, he also established a violence prevention effort involving both the public and private sectors. For developing the Infant Immunization Initiative, Ross received the Regional Community Partnership Award from the U.S. Department of Health and Human Services in 1992.

That same year, Ross made headlines across the nation when he advocated a needle-exchange program, through which intravenous drug users could trade their used needles for clean ones. "I see this as an absolutely critical step in stemming the tide of AIDS," Ross told *The Philadelphia Inquirer* at the time. The city's Board of Health endorsed the program, but an effort to have the state's Secretary of Health, Allan Noonan, exempt it from a law forbidding possession of drug paraphernalia without a prescription was unsuccessful. In a letter to Noonan, Ross implored him for assistance. "I am convinced that these needle-exchange programs are essential life-saving services in helping combat the current epidemic of AIDS which

tion – and see what happens there. The legislation is only as important as the person who carries it. Are you picking someone who has the vision, who shares your vision of a healthy community and shares your vision politically – or are you picking someone because they are a senior Republican and they've got clout in the legislative committee that they're sitting on?

Physicians as Advocates

For those of us who went into this profession because it was an eminent profession, it was a noble profession, unfortunately we are finding the health-care system in which we practice our work being dictated by market forces. It means that the same forces that dictate how people buy microwave ovens and cars and toaster ovens and CD players is the same set of market forces that will determine exactly how the health-care system is run. That is a scary thought. In that scenario, physicians have to be seen as advocates for patients and advocates for families and advocates for communities. In the absence of that, we will be seen as just merely another special-interest group whining all the way and reading about health-care reform rather than *writing* it.

Probably *the* single most effective, I believe, health-policy strategy in the decade of the 1980s was Mothers Against Drunk Driving (MADD). Although we *had* the data and we had the information and we had a Surgeon General, it was not the Surgeon General that changed America's attitude about drinking and driving. It was Mothers Against Drunk Driving. There was a power when they got up in front of a senator or city council person and said, "This is my 16-year-old son. He was killed by a drunk driver, and what are you going to do about it?"

There is a *power* to that kind of community-based and grassroots infrastructure that I think public health specifically and the physician community in general cannot [match]. So it means we are going to have to learn how to partner with communities in some very real ways to improve the well-being and health of our communities and to advance a prevention agenda. ■

is raging in our city," Ross wrote. "Three-quarters of all the cases of women and children who are getting the virus are related to IV drug use, either through their sex partners or the women themselves."

Similar needle-exchange programs have been endorsed by the World Health Organization, the National Institute of Medicine, and the Centers for Disease Control and Prevention. Nevertheless, opponents of the programs argue that needle exchanges encourage drug use.

Five years after Ross's plan was turned down, *The Lancet* published a study showing that needle-exchange programs could have prevented nearly 10,000 HIV infections among intravenous drug users, their sex partners, and their children in the United States from 1987 to 1997. The study also predicted that needle-exchange programs could have prevented about 11,300 HIV infections in the United States between 1997 and 2000.

When Ross arrived in San Diego, he hoped to start a needle-exchange program comparable to the one he had proposed in Philadelphia. In one of his return visits to Penn, he described the situation with a touch of irony. "I work for an all-white, all-Republican, all-fairly-conservative board of supervisors. They have taught me more about cost-efficiencies and cost-effectiveness and self-sufficiency rather than prevention. When the county administrative officer hired me from Philadelphia and took a look at my résumé, he said, 'You know, Dr. Ross, it would be great if you could do some of that immunization stuff that you've done in Philadelphia. That's great and you can bring that out here.' And I had done some stuff in violence and injury prevention here: 'Bring that out here, that's good, too. But this needle-exchange program that you did, why don't you leave that back East.' It was a sign of how local politics affects local policy, and I have grown accustomed now that I have been in San Diego. As Tip O'Neill has said, 'All politics is local.' Particularly with the shift from federal to local in terms of policy directions, I'm beginning to see that, in fact, all health policy may become local as well." Ross did not sulk over the needle-exchange program. Instead, it was a matter of realism and practicality – do *what* you can *when* you can for the good of your constituents.

The year after Ross drew media attention with Philadelphia's needle-exchange program, he faced a different kind of publicity. On its front page, *The Philadelphia Inquirer* accused him of violating a city code mandating that all officers of the city be residents of Philadelphia. (The same issue announced Ross's departure for San Diego.) A week later, the *Inquirer* published an editorial by Phyllis Kaniss, Ph.D., of Penn's Annenberg School for Communication, who has written books about Philadelphia politics. Kaniss criticized the journalistic ethics and priorities of the newspaper. "Most people who knew [Ross] even glancingly, like myself, could see that this was a man who went into public health to make a difference and who knocked himself out doing it," she wrote. "One of Ross's strongest commitments as health commissioner was to improve preventive health care among the city's poor residents. The *Inquirer* has devoted all too little energy in covering some of the health initiatives in this area." Kaniss faulted the paper for its meager coverage of such programs as Healthy Start, an outreach effort to reduce infant mortality, and "Summer of Service," a campaign that used volunteer college students to try to increase immunization rates among city children.

Looking back over the problems in public health that he and other advocates have faced, Ross identifies two kinds of solutions: technological – such as vaccination or medical care – and political. "The ones that are a steeper hill to climb are the ones that are political solutions. It's more a matter of coordination and nuts-and-bolts public-health work."

In a talk at Penn in 1996, Ross contrasted the leading causes of mortality and morbidity in cities in the early 1900s and today. For the former, the leading causes were accidents, tuberculosis, heart disease, Bright's disease and nephritis, pneumonia, diarrhea, influenza, typhoid, and whooping cough. Many of the diseases and conditions that were affecting communities, families, and neighborhoods in the early 1900s were "communicable diseases that are now virtually eliminated, if not completely eliminated, through the use of fairly modern technology, whether it's vaccines or whether it's antibiotics or infection control." Today, the leading causes of death are heart disease, cancer, stroke, pneumonia, chronic obstructive pulmonary disease, unintentional injuries, AIDS, suicide, cirrhosis, diabetes, and, recently joining the bottom of the list, homicide. As Ross pointed out, the causes today are generally preventable: "They are lifestyle diseases, they are behavioral diseases, they have behavioral conditions. . . . There are a lot of diseases for which we have no vaccines or antibiotics. There are no quick fixes."

The encouraging thing is that average life expectancy in America has increased substantially since 1900. But to go farther – to convince people to change their behavior – is going to take more hard work on the part of physicians and other health-care workers. In Ross's view, their record so far has been mixed, marked by occasional successes like the anti-smoking campaign, which he partially credits for lowering the number of smokers in the country (from around 45 percent of adults in 1960 to between 16 and 25 percent today). Among youth, however, the percentage has actually risen in recent years. But Ross is not discouraged. In Philadelphia and San Diego County, he worked hard for what he believed. Now, as president and CEO of the California Endowment with its activist agenda to improve the health of Californians, Ross is continuing the struggle – with a wealth of new resources. ■

A GRAND REUNION

On May 20, more than 40 senior alumni of the School of Medicine gathered for the Grand Reunion Gala Dinner. Among the many highlights of this year's Medical Alumni Weekend, this one stood out for bringing together these "proprietors of ancient mysteries," in the words of John L. McClenahan, M.D. '41. McClenahan was one of the alumni who had prepared remarks for the occasion, but when he was unable to attend, Sylvan H. Eisman, M.D. '41, stepped in to read McClenahan's remarks.

Described by McClenahan as "an architect of these revels," Eisman served as master of ceremonies for the program. In addition to McClenahan's remarks about the days before World War II, Brooke Roberts, M.D. '43D, and Truman G. Schnabel Jr., M.D. '43D, spoke about the War Years. Completing the program were John J. Mikuta, M.D. '48, and Faith Cramer Walsh, M.D. '48, who shared their impressions of the Postwar Years.

Although McClenahan's recollections were primarily about his Class of 1941, much of what he had to say applied equally well to several classes that came before and after – and much of what he said underscored the differences between the older alumni and those who have graduated from Penn in recent years:

We were lily white, 90 percent from the East, one in ten from the South, a smattering from Kansas and Missouri, and solitaries from Utah, North Dakota, and China. Many of us carried the scars of childhood illnesses – polio, rheumatic heart disease, osteomyelitis. What did we bring in our baggage? Civility, curiosity, and apprehension. Our devotion was to the American Medical Association, our scorn reserved for Socialism and its masquerades: group practice, Blue Cross, and Social Security.

We greeted one another bearing microscopes, the atlases of Spalteholtz, Gray, McGregor, and an array of dissecting tools. We formed quartets around zinc tables, squatted and embarked on our appointed task: to memorize everything in sight. Foramina, Krebs cycle, the posture of decerebrate cats. We pondered the dose of Creta Preparata and the caprice of zwitterions. Eighteen months later, slightly depleted by low grades and consumption, we advanced to the clinics and the wards.

By every account, our bedside instructors were as good as the country offered, a proven roster of young, respected clinicians at their prime. In 1939 T. Grier Miller was 53; Eugene Pendergrass, 44; I. S. Ravdin, 45; Edward Strecker, 53; Francis Wood, 38. They wrote articles for journals now and then, but what we remember is not their statistics but what they were. They were not miracle-workers. They made few promises. They did not advertise. They trusted their feelings and intuitions. Their mistakes were discounted or forgiven. They acknowledged death.

Since then, some diseases, we are told, have almost vanished: measles, catarrhal jaundice, ptomaine poisoning, smallpox, rheumatic fever. Even oldies like cancer of the stomach seem to be on the run. Some of our handy panaceas have vanished as well, compounded with such hope: Ichthyol, Dover's Powder, krebiozen, all yielding to tailored genes.

Peering back to the 1940s, we come upon early satisfactions and rising misgivings. Aspirations that sustained us are tarnished now as what was called a profession became a branch of engineering and double-entry bookkeeping. Pain seems to have been reduced to an image on paper and numbers in a book. Surgeons are approaching the human breast with a new deference; clinics famed not long ago for heroic eviscerations are offering meditation, massage, and Tibetan drumbeats. Unspeakable "quackeries" – acupuncture, naturopathy, and chiropractic – are curing people, to our collective surprise.

McClenahan concluded his remarks by saluting those of his class who have died – and those, "only slightly worn," who survive to form the core of the medical school's faithful. ■

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in Epidimicā scabiem que passim toto orbe grassat vaticinū dicat.

LICHNICA GENESIS

Background: Michelangelo, *Fall of the Damned*, detail from *The Last Judgment*, 1536-1541. Sistine Chapel, Rome.
Foreground: Albrecht Dürer, *Syphilis*, 1496. Kupferstichkabinett Staatliche Museen Preussischer Kulturbesitz, Berlin.
Woodcut for a broadside or poster, it is the earliest known poster to feature syphilis.

"THE JUST WRATH OF GOD"

THE COMING OF THE POX

By Peter Lewis Allen

PERHAPS MORE THAN ANY OTHER DISEASE BEFORE OR SINCE, SYPHILIS IN EARLY MODERN EUROPE PROVOKED THE KIND OF WIDESPREAD MORAL PANIC THAT AIDS REVIVED WHEN IT STRUCK AMERICA IN THE 1980S.

Shortly after Christopher Columbus and his sailors returned from their voyage to the New World, a horrifying new disease began to make its way around the Old. The "pox," as it was often called, erupted with dramatic severity. According to Ulrich von Hutten (1488-1523), a German knight, revolutionary, and author who wrote a popular book about his own trials with syphilis and the treatments he underwent, the first European sufferers were covered with acorn-sized boils that emitted a foul, dark green pus. This secretion was so vile, von Hutten affirmed, that even the burning pains of the boils troubled the sick less than their horror at the sight of their own bodies. Yet this was only the beginning. People's flesh and skin filled with water; their bladders developed sores; their stomachs were eaten away. Girolamo Fracastoro, a professor at the University of Padua, described the onward march of symptoms: syphilis pustules developed into ulcers that dissolved skin, muscle, bone, palate, and tonsils – even lips, noses, eyes, and genital organs. Rubbery tumors, filled with a white, sticky mucus, grew to the size of rolls of bread. Violent pains tormented the afflicted, who were exhausted but could not sleep, and suffered starvation without feeling hunger. Many of them died.

The public was appalled by this scourge. Physicians too, von Hutten reported, were so revolted that they would not even touch their patients. As in the earlier Middle Ages, divines quickly announced that the extraordinary sins of the age were responsible for the new plague; others blamed the stars, miasmas, and various other causes. Barrels of medical ink were spilled on the question of where the disease had come from. Treatments, preventions, and cures were sought. The idea of infection began to be taken far more seriously than it ever had before. Hospitals transformed themselves in response to the new plague – sometimes for the better, but often for the worse, as when, in fear, they cast their ulcerated patients out into the streets. Most of all, people continued to follow their old ways: in the face of this new threat, they castigated and persecuted the sick. As infection spread, so did fear; and where fear went, blame followed close behind.

Perhaps more than any other disease before or since, syphilis in early modern Europe provoked the kind of widespread moral panic that AIDS revived when it struck America in the 1980s. Syphilitics were condemned from pulpits and from chairs in university medical schools. John Calvin (1509-1564) announced that "God has raised up new diseases against debauchery"; medical authorities willingly agreed. The greatest English surgeon of the sixteenth century, William Clowes (1540-1604), who counted Queen Elizabeth among his patients, announced to his colleagues and patients that syphilis was "loathsome and odious, yea troublesome and dangerous, a notable testimony of the just wrath of God."

Motivated by these fears, panicky towns and hospitals barred their gates against syphilitics. Within two years of the first reported cases, cities from Geneva to Aberdeen evicted the pox-ridden. Often, city fathers blamed prostitutes for the disease, and some threatened to brand their cheeks with hot iron if they did not desist from their vices. What was more extraordinary, however, was that hospitals refused to admit syphilitic patients. Hospitals in early modern Europe were charitable institutions, designed to provide care and shelter to the sick

poor. The most famous of them, the Paris Hôtel-Dieu, prided itself, with one single exception, on the breadth of its generosity. This hospital boasted that it "receives, feeds, and tends all poor sufferers, wherever they come from and whatever aliment they may have, even plague victims – though not if they have the pox." Many cities threw the poxy poor into the leper houses that for years and years had housed only ghostly memories; Toulouse kept its infected prostitutes in a ward that was little more than a high-security prison. Two infamous hospitals in Paris, Bicêtre and the Salpétrière, had patients "piled upon one another," in the words of historian Michel Mollat, "like a cargo of Negroes in an African slave shop."

Fear of contact was one reason for this behavior. Even more than this, however, the sick – like lepers – were often reviled because people believed that they had brought their torments upon themselves. Some pundits, early on, announced that blasphemy was the vice that had called down this new torment from heaven, but most often syphilis was attributed to the sin of lust. This was certainly a logical assumption: soldiers and prostitutes, traditionally associated with sexual license and moral disorder, were among the first victims, and the connection became even closer when people noticed that the disease's first sores often turned up on the genital organs. The loathsome symptoms were taken as signs that the sick housed debauched and sinful souls. This reasoning stood behind many of the cruelties that individuals, doctors, hospitals, priests, ministers, and even entire towns and cities inflicted on people with the pox.

Medical research in the twentieth century mostly takes place in the lab; in the Renaissance, though, researchers

A History of Fulmination

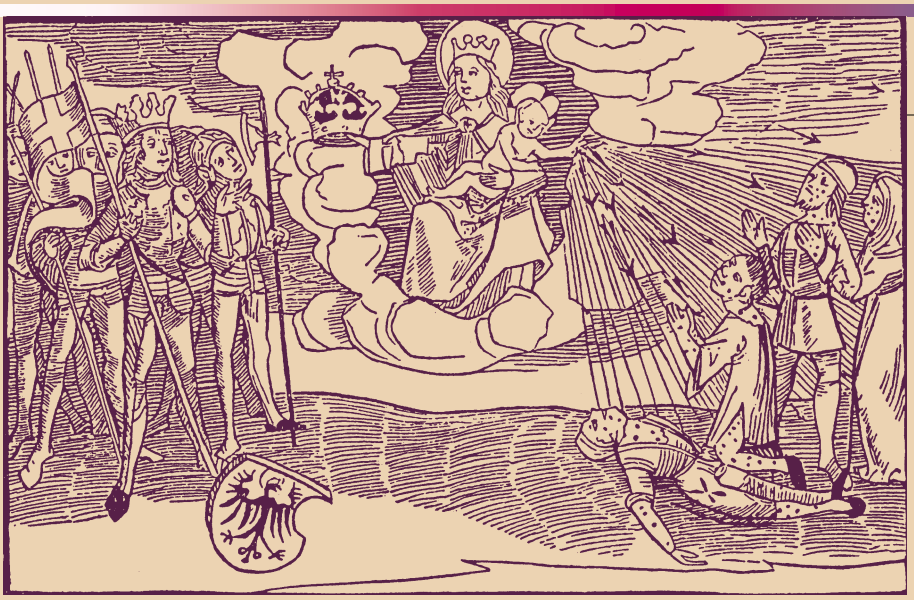
A LITERARY SCHOLAR LOOKS AT THE ORIGINS OF A TRADITIO

Early in his talk at the University of Pennsylvania in April, Peter L. Allen explained that, like many of his colleagues then enrolled in the graduate programs of the Wharton School, he had had "a former life." Allen had earned his Ph.D. degree in comparative medieval literature from the University of Chicago and had built a successful career as a scholar. He taught at Princeton University, the University of Southern California, and Pomona College. He had also published a book, *The Art of Love: Amatory Fiction from Ovid to the "Romance of the Rose"* (University of Pennsylvania Press). But, as he told the audience gathered in the Wharton School's Steinberg Hall-Dietrich Hall, "I began to feel like I didn't want to be doing what I was doing." In large part, his discomfort was a result of the AIDS crisis, exacerbated by the feeling that he could not just stand by as friends died. For a time Allen was a public policy associate at the Gay Men's Health Crisis. What especially stunned him in the early 1980s was the suggestion, heard often in the popular media but sometimes also in medical publications, that AIDS victims had brought their agony on themselves. As Allen told the Penn audience, "There was something massively wrong on an almost cultural level."

As a way to understand this attitude, Allen began to trace its origins in Western culture. His research led him to become a scholar-in-residence at the College of Physicians of Philadelphia and, eventually, to publish *The Wages of Sin: Sex and Disease, Past and Present*, issued in June by the University of Chicago Press. The argument in his book, he said, is that "what we saw with AIDS is simply a replay" of Western attitudes toward several diseases and practices – "lovesickness" and leprosy of the Middle Ages, syphilis in the Renaissance, bubonic plague in 17th-century England, masturbation in the 18th and 19th centuries. Raised in a Jewish household, Allen came to view Western culture as fundamentally built on a strand of Christianity "that's somewhat antithetical to the body."

Allen ends his book as he began it, by considering the matter of AIDS. For him, the 1980s and 1990s was a time of national tragedy made worse by the attitudes and actions of some of the nation's civic, religious, and government leaders. As he writes in *The Wages of Sin:*

> Like lepers, some people with AIDS have been stigmatized and excluded from society; like syphilitics and those stricken with plague, some have been blamed for being sick and accused of bringing catastrophe down not only on their own heads, but also on the heads of the so-called innocent. As with masturbation and lovesickness, the debate about AIDS focused regularly on prevention and the question of whether certain kinds of sexual activity were benign or harmful in themselves – and whether they could be discussed in public. Despite the profound differences between late 20th-century America and the periods discussed in previous chapters, the guilt, the accusations, and the patterns of blame hearkened back through time, recalling moralists and moralities one might have imagined – *I* had imagined – were dead and gone.



The arrows of syphilis. Woodcut from Joseph Grünpeck, *Treatise on the Pestilential Pox or French Disease* (Augsburg, 1496).

went first and foremost to the library to see what the ancients had said. The problem, however, was that it was not clear that in this case the ancients had anything useful to offer. Nothing the Greek and Arabic authorities had described seemed very similar to the cases turning up in increasing numbers on the physicians' rounds and in the streets, and so it was hard to affirm that the old remedies would do any good.

The theories that tied the disease to the Americas were the most innovative, since they focused on the new idea that diseases could travel from one person to another. (They may also have been the most accurate:

TO THE MIDDLE AGES AND THE RENAISSANCE TO TRACE N THAT SEES DISEASE AS DIVINE PUNISHMENT FOR SIN.

As Allen made clear both in his book and his talk, the moralistic attitude was very much alive. In his talk, Allen quoted the Reverend Jerry Falwell, who in 1987 told a national television audience that "a God who hates sin has stopped [homosexuality] dead in its tracks by saying, 'do it and die.'" Allen also cited presidential candidate Patrick Buchanan, who called AIDS "nature's form of retribution." Statements of this kind, Allen said, "colored the national discourse."

But Allen also praised some people in his chapter on AIDS, including C. Everett Koop, M.D., G.M.E. '47, the former surgeon general and emeritus professor of pediatric surgery at Penn: "Bearded, bespectacled, outspokenly Christian, professional, and gruff, Koop nearly failed to be confirmed as surgeon general because much of America considered him to be too conservative for the post." Originally, Allen writes in his book, Koop was forced to keep quiet on the topic of AIDS by his superiors in the government. Yet Koop became one of the most influential proponents of AIDS prevention during those years. Known for his strong antiabortion views, Koop came to believe that it was "his duty to protect human lives, whether those of unborn children or those of drug users" – or those who might be stricken by AIDS. Allen quotes Koop's description of himself as "the Surgeon General of homosexuals as well as of heterosexuals, and of the promiscuous as well as the moral." Koop's comments are echoed in *The Wages of Sin* by Helene Gayle, M.D. '81, now director of the National Center for HIV, STD, and TB Prevention at the Centers for Disease Control and Prevention. Gayle, writes Allen, believes that "the responsibility of the government's public health agencies is to save the lives of all citizens, not just of some." Allen adds, however, that "in this area these agencies have not lived up to their task."

One of the members of the Wharton audience raised the issue of a cyclical view of history versus a progressive view. People listening to Allen's talk alternately laughed and cringed at some of his examples of diagnosis and treatment – but are today's methods really any better? In effect, do we flatter ourselves while smiling at the limitations of the past? For one thing, Allen argued, "we have far better science" today, but the world is smaller and both infections and technology move at amazing speeds. From a sociological perspective, he argued, the United States "has by now come around on AIDS by and large." Still, in *The Wages of Sin*, Allen ended his chapter on AIDS by reminding readers that the disease continues to be a problem: "I call to the country to rise up, remember that we are our brothers' and sisters' keepers, and to draw from our faith and experience the strength and compassion we will need to bring an end to this suffering and bring about a future in which there can be love and health enough for all."

His book published, his "former life" closed, Allen has embarked on a new career: He was awarded his M.B.A. degree in health-care management from the Wharton School in May and is now a management consultant at a major firm in New York.

– John Shea

many scientists today believe that the New World was the source of the syphilis bacterium, or of a new strain or cofactor that triggered the epidemic of the 1490s.)

Regardless of its geographic origin, people quickly began to notice that the pox traveled from one person to another. They sometimes blamed transmission on common and morally innocuous practices – drinking from a common cup, kissing friends in church, following a syphilitic comrade on the latrine. But from 1495 on, the route of transmission people talked about most was sex. Syphilis was well on its way to becoming a "venereal" disease, and a public mark of shame.

In the early 1500s, chillier moral winds began to blow. The public, which in the past had tolerated brothels as a fact of life, began to consider them shameful. Prostitutes were denounced and arrested. Increasingly, women in general were blamed as a corrupting influence on men. Part of this change was the result of religious developments. Protestants made much of the sins of the flesh: lust so afflicted humankind, preached Martin Luther (1483-1546), that God had been obliged to create matrimony as "a hospital for incurables." Calvin saw sexual vices everywhere. Did syphilis contribute to these changes? Obviously, not all can be attributed to the new disease: the rise of Protestantism was a far larger and more influential matter than any bacterium. But a new, virulent, sexually transmitted infection can only have reinforced people's increasing fears and anxieties about sex.

Neither preachers nor physicians had the slightest hesitation about announcing that syphilis – and syphilitics – were wicked. Both Catholics and Protestants endorsed this view and proclaimed it from their pulpits. Some physicians took a more tolerant stance than these vitriolic preachers. Others, however, were even more censorious than the men of the cloth, and warned that pox victims were so sinful that they did not even deserve medical treatment.

The Martyrdom of Mercury. Treatments for syphilis. J. Sintelaer, *The Scourge of Venus and Mercury, From a Treatise on the Venereal Disease* (London: G. Harris, 1709). Courtesy of the Wellcome Trust Medical Photographic Library, London.

The famous anatomist Gabriel Fallopius (1523-1562), who had succeeded to Vesalius's chair at the University of Padua, announced that God had sent the "French scab" expressly to teach people to beware his wrath and abandon venereal lust. Juan Almenar (another of Pope Alexander VI's doctors, fl. ca. 1500) believed that vices and diseases came in pairs, like the animals on Noah's ark. Thus pride was matched with fever, sloth with gout, and lust with leprosy and its modern reincarnation, the pox. These views – a throwback to ancient ideas of disease that are still echoed by the self-help preacher-healers of today – made offering a cure a moral dilemma: what if doing so endangered the patient's soul – not to mention that of the doctor, who fostered sin by curing the afflictions it caused?

The fact that babies and faithful wives could contract syphilis made it impossible to condemn every single person who came down with the disease. But babies had little in common, surely, with prostitutes and adulterers, so medical authorities divided syphilitics into two groups, and treated them accordingly: the "guilty," who had earned the pox by their sinful behavior, and the "innocent," who had done nothing to deserve it. Along with drugs, these physicians also dispensed moral advice that would provide a model for social views of venereal disease in centuries to come.

Treatments for the pox were often more excruciating than the disease's symptoms. According to their place in society, early modern Europeans received varying types of medical care, but all were problematic. The rich were seen by physicians, whose treatments ranged from the useless to the deadly; the middle classes could consult self-help books, or hire barber-surgeons to torture them with knives, drills, and white-hot cautery irons. The poor had to deal with charity hospitals. If admitted to these institutions, they were housed and fed, but they also shared beds and germs with all the other diseased patients in their wards, and often received little medical help; if they were refused admission, they suffered and died in the streets. It was hard to say which was worse – to languish untreated,

as syphilis ate its way through one's organs, or to be tortured by poisonous and savage remedies administered by physicians and surgeons who often believed that their job was to punish their patients for their sins. To have syphilis in early modern Europe was a torment and a tragedy for rich and poor alike.

Doctors did not use harsh remedies at first, perhaps because the disease had not yet earned real opprobrium, or perhaps because these early cures derived from the Galenic model, which, whatever its limitations, at least employed fairly gentle methods. Physicians who viewed disease as a humoral imbalance recommended baths, chicken broth, bloodletting, syrups, the milk of a woman who had given birth to a daughter, and even that old standby used for curing lovesickness, sexual intercourse. (This last piece of medical foolishness, fortunately, did not garner many endorsements.) Others warned of the dangers of promiscuous sex, particularly with prostitutes; some even proposed safer sex techniques for preventing the pox, such as washing the genitals, before or after intercourse, in hot vinegar or white wine. Gradually doctors came to understand that, once acquired, syphilis tended to persist, and gradually its severe symptoms and venereal taint attracted much more aggressive treatment. Some doctors, for example, injected drugs directly into male patients' infected urethras. A character in the writings of the Dutch humanist Desiderius Erasmus (1469-1536) spoke in favor of binding female syphilitics in chastity belts, and of deporting, castrating, and even burning pox-ridden men alive. Surgeons treated racking syphilis headaches by trepanation, the ancient practice of boring holes into the skull. Oozing ulcers in skin and bone were cauterized with fearsome, white-hot irons.

Bleeding, bathing, cautery, and herbs were used now and then, but, most often, physicians fought syphilis with two important drugs: mercury, and the wood of the Central American guaiac, or *lignum vitae*, tree. Ulrich von Hutten was well acquainted with these, having suffered through the appalling mercury vapor treatment eleven times in nine years.

These doctors were not wrong about the virtues of mercury, which Arab physicians had used for centuries to treat diseases of the skin: mercury kills the syphilis bacterium *in vitro*, and it may also help the body's immune system to attack the microorganism. The problem, however, is that mercury is a deadly poison, particularly in vapor form or when combined with other substances. Von Hutten correctly noted such symptoms of mercury poisoning as excessive salivation, loosening of the teeth, pain and numbness in the extremities, uremia, and renal damage; other toxic effects include vomiting, dizziness, convulsions, tremors, liver damage, anorexia, severe diarrhea, and mental deterioration. This remedy may have helped cure skin problems, but it also hastened syphilitics to their death.

Did religious orientation affect the treatment of patients suffering from the physical and moral scourge of syphilis? It seems likely. Why else would hospitals admit plague victims, swollen, vomiting, and quick to die, yet turn away from those afflicted with the pox? It was not a question of the patients' adherence to the one true faith: the Hôtel-Dieu took in not only Christians but even Moslems and Jews, and kept an assortment of clergymen on staff to tend to their spiritual needs. The pox, however, was evidence of a kind of sin the hospital feared even more than heresy or death.

True, there were complicating factors. Hospitals generally tried to avoid taking in patients with chronic or incurable diseases. Then as now, hospitals preferred those who would recover quickly, and who would not be a long-term drain on their resources. Moreover, syphilis arrived at a particularly inconvenient time. French hospitals had been badly hurt by the long financial depression caused by the Hundred Years War (1337-1453), and, starting in the 1490s, the Paris Hôtel-Dieu was racked by accounting scandals and ferocious staff disputes.

Most of all, however, syphilitic patients were turned away because their disease was a moral problem so severe that it barred even charity itself. Part of this rejection was caused by revulsion; part was caused by the fact that charity was becoming a much more selective enterprise than it had been. Starting in the 1500s, those who gave imposed increasingly high moral standards on those who received, and poor syphilitics were obvious targets for the judgmental upper classes.

There were some bright spots in the gloom. Some physicians were moved to compassion for their syphilitic patients. Some cities were charitable. The new disease may also have helped to advance medical knowledge and health care, as physicians thought more carefully about infectious diseases, and cities and hospitals developed specialized clinics, rather than treat all the sick poor together in the same infectious wards.

All too often, however, syphilis provoked responses reminiscent of the most brutal and unfeeling reactions to leprosy and plague. Charity and compassion were often overpowered by prejudice and fear. The limits of medical knowledge and old histories of anger and terror at disease proved almost irresistible, and syphilis created even more panic by mixing terror about physical illness with Christian culture's ancient and profound anxieties about sex. Those unfortunate Europeans who suffered from syphilis experienced the worst of disease, medicine, and religious condemnation all at once – a deadly mixture, and a dangerous model for the centuries ahead. ■

PRIORITY:

Originally anonymous benefactors, Walter (M.D. '57) and Anne Gamble, top, went public at the 1996 Commencement of the School of Medicine. Below, they are surrounded by many of the Penn Med students they supported through the Twenty-First Century Endowed Scholars Program.

Financial Aid

Financing a medical education over the last decade has presented Penn Med students with enormous challenges. They have had to develop a keen economic strategy and look closely at their career goals. The Golden Age of medical education is over. Costs are higher, interest rates on loans are higher, student indebtedness is higher, and the present structure of managed care and health systems restricts potential growth – all of which restricts the ability of physicians entering the medical profession to repay loans without inordinate burdens. The University of Pennsylvania School of Medicine recognizes this difficult situation, which is why it designated support of student financial aid as the major learning priority of its five-year *Creating the Future of Medicine* capital campaign.

Over the past ten years, alumni and friends of the School of Medicine have become much more aware of the problem of loan indebtedness; in the five years since the campaign was launched, many graduates and friends have demonstrated their gratitude to the school and expressed their concern for the heirs of the medical profession by generously supporting student financial aid and by establishing student scholarships. Among them are alumni and friends such as the Gambles, the Jordans, the Kligmans, the Welshes, and numerous volunteers, as well as groups like the National Alumni Council, chaired by Stanley J. Dudrick, M.D. '61. All have come forth to help alleviate the burden of educational debt for Penn Med students. The actual growth in the numbers and varieties of financial-aid packages has enabled the School to significantly increase financial support for its students.

Those Amazing Gambles and Their Scholars

For a long time, Anne and Walter J. Gamble, M.D., a member of the Class of 1957, had been greatly concerned with the increasing debt shouldered by most medical students – debt that, in earlier periods, had not been a critical issue. The Gambles had a dream to create an endowed fund that would provide scholarship assistance for medical students. The expenses of an undergraduate education compounded with the costs of medical-school training often result in overwhelming financial challenges that may compromise career decisions, life choices, and life styles. The Gambles also realized that society, too, is affected when qualified physicians who aspire to careers in academe, research, or community service are discouraged because of the prospect of lower pay and heavy educational debt.

After "navigating the legal channels," Anne and Walter Gamble decided to use funds from a family trust to "make our dream happen." Impressed with Penn's concern for the problem of student debt, the Gambles set out to create the Twenty-First Century Endowed Scholars Program at the School of Medicine. In 1991, at an initial lunch with William N. Kelley, M.D., then dean of the University of Pennsylvania School of Medicine and CEO of the Medical Center, the Gambles presented their plan to contribute a sum of $10 million in support of student scholarships at the School. Kelley enthusiastically seized upon the Gambles' proposal and set about selecting a diverse committee of women and men drawn from both inside and outside the University to review student profiles and to identify potential scholarship candidates. The Gambles chose not to sit on that committee but made clear their preference for scholarship candidates who would be "topnotch, well-rounded students, able to become 'ambassadors' of the Program." Their other stipulation was that they remain anonymous to all but a very few administrative personnel at the School of Medicine. Above all, they wanted the scholarship recipients to be "be free from any sense of obligation to [them]" and remain "free to respond to the larger challenge – to reinvest the benefit they have derived by helping others, whether through financial contributions, medical service, or promotion of the goals of the program."

The Gambles' Twenty-First Century Endowed Scholars Program was launched in 1992, creating 24 full-tuition scholarships. By 1996, four years after its inception, the program was flourishing, its initial success measured by the graduation of the first six scholars. Anne and Walter Gamble emerged from their anonymity at Commencement on May 20, 1996, when they were presented to School of Medicine alumni and to the first class of "Gamble Scholars."

The Gambles' initial encounter with the recipients was very moving and stimulating. They learned first-hand of the recipients' goals and aspirations, met with their families, and witnessed what they called "their true altruism and genuineness right alongside their aptitude and energy." At the same time, the Gambles revealed themselves as modest, caring, highly accessible benefactors, passionately committed to their Twenty-First Century Endowed Scholars Program and to the welfare of medical students at Penn. Because of their unique brand of inclusiveness and dedication, the

Ray and Joanne Welsh sponsored a "challenge" to encourage Penn faculty contributions to financial aid.

Gambles say they have "broadened our immediate family" through their relationships with the scholars. Literally, they have opened their homes to the recipients. "Students call us, they visit, and we enjoy dinners together," they report. "We can talk to the students about their careers, where they are headed, what their aspirations are . . . and we look forward to staying in touch with them after they graduate and go to all corners of the world."

In 1996, the Gambles again showed their support of student financial aid and the Scholars Program by introducing another program inducement for School of Medicine alumni. With an additional $2 million, they established the Gamble Challenge to alumni donors at the $25,000 level. That challenge was realized through the generosity of 58 School of Medicine alumni, 14 of whom responded with contributions of $50,000 or more.

The year 2000 has brought yet another expression of Gamble generosity. They contributed an additional $15 million to provide supplemental support to the Twenty-First Century Endowed Scholars Program. As a result, the Gamble Fund eventually will support a total of 40 students, selected by the School of Medicine's Office of Admission and Student Financial Aid, with full-tuition, four-year scholarships. At the beginning of each academic year, ten scholarship recipients are chosen from among the pool of incoming students.

The Welshes Galvanize the Faculty

Another couple whose generosity has supported financial aid for Penn Med students is Raymond H. and Joanne T. Welsh. Through their $1 million contribution, they established the Welsh Challenge to University of Pennsylvania School of Medicine faculty, one of the more creative fundraising initiatives of the *Creating the Future of Medicine* campaign. The Welsh Challenge was designed to match – dollar for dollar – all faculty gifts of $1,000 earmarked to funds supporting student financial-aid programs. The Challenge helped launch the School of Medicine Faculty Campaign, which flourished under the conscientious leadership of the campaign chair, Arthur K. Asbury, M.D., currently the school's interim dean. The partnership of the Welsh Challenge and the Faculty Campaign proved highly successful, bringing in more than $3 million in financial aid.

Ray and Joanne Welsh are both longtime, dedicated friends of the Medical Center and Health System. Ray – a graduate of the Wharton School's Class of 1953, a trustee of both the University and the Health System, and chair of the UPHS Campaign – and Joanne, a 1952 alumna of Penn's College for Women, were inspired by Anne and Walter Gamble's philanthropic endeavors in support of School of Medicine students. As the Welshes put it, "We honor the School's impressive history and are most interested in its present students and their welfare." The Welshes believe that "the education and training of young physicians is the essence of the future of medicine."

The Kligmans – Albert (M.D. '47) and Lorraine – continue th

The Facts About Stu

Graduates of U.S. medical schools in 2000 owed an average of $94,900 in educational debt. Eighty percent of that educational debt is financed through loans, including the Federal Stafford Loan programs that allow borrowing of up to $38,500 per year to qualified students. For students who qualify for the maximum federal loan, $8,500 is subsidized by the government and $30,000 is unsubsidized, which means that interest begins to accrue immediately upon disbursement. Private, unsubsidized loans also are available at higher interest rates from groups like Med-

Yet these same students are challenged at every turn by cumulative tuitions and living expenses and faced with a health-care environment that is changing, sometimes tumultuously. "The young doctor inclined toward a career in academia or in a less remunerative discipline is likely to review his or her options when debt repayment is on the horizon."

That is why Joanne and Raymond Welsh are committed to championing those who benefit from the School of Medicine's educational programs. They have said that they derive joy from the success of others – "especially through the support of extraordinary, talented, dedicated young researchers or teachers or clinicians aspiring to care for the health and well-being of humankind." The Welshes' inspired strategy was to encourage the faculty of Penn Med to join with them in supporting endowed financial aid for those very students of outstanding promise.

heir longtime support of young doctors.

dent Financial Aid

Loans, Access, and MedCap, based upon the credit history of the borrower.

Across the nation, 20 percent of student loan debt is financed with private scholarships. The funds provided through private scholarship sources are paid in the form of grants that do not need to be repaid. Therefore, student scholarship is the most valuable form of financial aid available to medical students. Those medical schools that can afford to offer a competitive financial aid package are best able to attract the finest students regardless of financial need.

Barrie and Henry Jordan (M.D. '62) established a fund for students otherwise unable to meet the costs.

The Support of Others

In addition to the Gambles and the Welshes, other members of the Penn Med family have made remarkable contributions to student financial aid. Albert M. Kligman, M.D.'47, Ph.D., and his wife, Lorraine H. Kligman, Ph.D., pledged $1 million in support of the Twenty-First Century Endowed Scholars Program. Albert is the renowned emeritus professor of dermatology in the School of Medicine and Lorraine is research professor of dermatology at the school.

The Kligmans' gift is consistent with their long-time support of the doctors of the future. Albert Kligman has devoted much of his professional life to helping young investigators in his own specialty of dermatology to get the best education and to establish their careers. By providing funds to support scholarship for School of Medicine students, Lorraine and Albert Kligman have invested in the future of the School and of its students.

Henry A. Jordan, M.D.'62, G.M.E.,'67, and his wife, Barbara McNeil Jordan, have pledged $500,000 to establish the Jordan Family Endowed Scholarship Fund at the University of Pennsylvania School of Medicine. Jordan Family Scholars will be chosen annually from among those students who otherwise would be unable to meet the costs of their medical education at the School.

For more than two decades, the support of Dr. and Mrs. Jordan has been tremendously important to the University of Pennsylvania Medical Center. They have been regular contributors to the School of Medicine's Annual Giving Fund and to a wide variety of fundraising efforts. As chairman of the Class of 1962's 25th reunion, Henry Jordan was tireless in leading a five-year fundraising campaign that was strikingly successful – witness the Class of '62 Lecture Hall at the School of Medicine. Dr. Jordan was also instrumental in establishing the School of Medicine's original annual giving program and continues to help raise funds from among his fellow alumni in the Class of 1962. The current president of the Medical Alumni Society, he was the first recipient of the School of Medicine's Medical Alumni Service Award. He is a former professor of psychiatry in the School of Medicine who retired from its faculty in 1986.

Now, continuing their tradition of generosity and loyalty, Henry and Barrie Jordan have created another legacy in support of the School of Medicine and its students. Through the Jordan Family Endowed Scholarship Fund, they are investing in the true foundation of the School of Medicine and its most precious commodity – the students who represent the future of medicine.

Over the years, it is not only individuals who have endowed scholarships and supported financial aid. Twenty-five alumni classes have also done so, through "milestone" reunion gifts to the School of Medicine. The school's faculty members have also contributed generously in support of student financial aid through the School of Medicine Faculty Campaign. And multitudes of alumni and friends have given at every level to support Penn Med students. For this generosity and vision, the School of Medicine and its students are forever grateful.

A Continuing Priority

To maintain its tradition of attracting the top student candidates in the nation, the University of Pennsylvania School of Medicine must offer student financial-aid opportunities that are competitive with those of its peer schools. The "best and the brightest" always have the option to choose the best schools. A major decision-making factor for these students is *how* their educations will be financed. That is why dollars designated specifically for financial aid – both need-based and merit-based – are critical for students deciding to attend Penn's School of Medicine.

Support of student financial aid in its many forms is a continuing investment in the future of Penn Med students who show promise of becoming the outstanding physicians / scientists of the Twenty-First Century. Through this kind of giving, students are granted two very profound educational gifts – the freedom of career choice and the alleviation of crushing financial debt.

For more information on how to give to the University of Pennsylvania School of Medicine in support of student financial aid or to send a contribution, please contact:

Irv Hurwitz, Director, Alumni Development
Medical Center Development and Alumni Relations
3535 Market Street, Suite 750
Philadelphia, PA 19104-3309
215-898-7986
e-mail: hurwitz@ben.dev.upenn.edu

Where They Went

Following graduation in May, members of the Class of 2000 are taking their residencies at the following sites.

CALIFORNIA
Long Beach
St. Mary's Medical Center
Kun Huang, medicine (preliminary)

Los Angeles
Kaiser Permanente
Stacey P. Rosenbaum, obstetrics-gynecology

UCLA Medical Center
David Chang, radiology-diagnostic
Tiffany S. Hackett, emergency medicine

UCLA Neuropsychiatric Institute and Hospital
Lindsay R. Kiriakos, psychiatry

San Diego
University of California-San Diego Medical Center
Colleen J. Buono, emergency medicine
Christopher Di Meo, anesthesiology

San Francisco
University of California-San Francisco
Abraham S. Chyung, medicine (preliminary)
David Hollander, ophthalmology
Benjamin H. Meisel, pediatrics
Joseph L. Pace, medicine-primary care

COLORADO
Denver
University of Colorado School of Medicine-Denver
Jennifer S. Betz, pediatrics

CONNECTICUT
New Haven
Yale-New Haven Hospital
Laura L. Kruper, general surgery
Mary M. Tomayko, dermatology

DELAWARE
Wilmington
Christiana Care (Medical Center of Delaware)
Victoria S. Sokolove, family practice

Dupont Children's Hospital Thomas Jefferson University
Andrew S. Wood, pediatrics

DISTRICT OF COLUMBIA
Children's National Medical Center
Tien T. Vu, pediatrics

GEORGIA
Atlanta
Emory University School of Medicine
Seth A. Kraines-Hoffmann, internal medicine

HAWAII
Manoa
University of Hawaii Affiliated Psychiatry Residency
Daniel W. Ulrich, pediatrics / psychiatry / child psychology

ILLINOIS
Chicago
Rush-Presbyterian-St. Luke's
Steven H. Goldberg, orthopaedic surgery

University of Chicago Hospital
Seth W. Glickman, emergency medicine
Kara J. Nance, internal medicine
Steven B. Pestka, medicine-pediatrics

Evanston
McGaw Medical Center-Northwestern University
Kevin J. Chang, radiology-diagnostic

MARYLAND
Baltimore
Johns Hopkins Hospital
Rachel L. Damico, internal medicine
Annamaria Hibbs, pediatrics
Walter M. Klein, pathology
John J. Yang, anesthesiology

Johns Hopkins Bayview Medical Center
Amy Freedman, medicine-primary

MASSACHUSETTS
Beverly
Tufts-New England Eye Center
Gregory R. Blaha, ophthalmology

Boston
Boston Combined Pediatrics Residency
Joyce M. Lee

Boston University Medical Center
Rohini N. Nadgir, radiology-diagnostic

Brigham & Women's Hospital
Gregory B. Atkins, internal medicine
Amy F. Tsang, radiology-diagnostic

Massachusetts General Hospital
Helen A. Shih, radiation oncology
Benjamin A. Solky, dermatology
Ken Solt, anesthesiology
Marketa M. Wills, psychiatry

New England Medical Center
Nicole R. Smith, internal medicine

MICHIGAN
Ann Arbor
University of Michigan Hospitals
Daniel A. Rontal, otolaryngology
Naoyuki G. Saito, radiation oncology
Marc B. Schwartz, internal medicine

Detroit
Henry Ford Medical Center
Sameh Assad, medicine (preliminary)

MINNESOTA
Health Partners Inst Medical Education
Cynthia E. Kelmenson, emergency medicine

NEW JERSEY
Piscataway
University of Medicine and Dentistry of New Jersey-Robert Wood Johnson University
Herve C. Boucard, internal medicine
Heather W. Harnly, orthopaedic surgery
Tatyana Milman, ophthalmology

NEW YORK
Brooklyn
SUNY Health Science Center
Gina A. Taylor, dermatology

Manhasset
North Shore University
Omotola A. Hope, medicine (preliminary)
Alexander M. Nemeth, radiology-diagnostic

Mineola
Winthrop University Hospital
Priya Kumar Shah, medicine (preliminary)

New York City
Albert Einstein College of Medicine
Dorothy J. Huang, obstetrics-gynecology
Aubrey Okpaku, neurosurgery

Beth Israel Medical Center
Naomi J. Lubarr, medicine (preliminary)

New York-Presbyterian / Cornell Medical Center
Joshua I. Bleier, general surgery

New York-Presbyterian / Columbia Presbyterian Medical Center
Ellen Delea, family practice

New York University Medical Center
Sherry H. Hsiung, dermatology

St. Vincent's Hospital
Jennifer L. Rhodes, general surgery

NORTH CAROLINA
Chapel Hill
University of North Carolina Hospital
Hanna Lines Kelly, internal medicine

Charlotte
Carolinas Medical Center
Djenaba T. Bradford-Kennedy, medicine (preliminary)

OHIO
Cleveland
University Hospitals of Cleveland
Michael W. Ciaschini, plastic surgery

Cleveland Clinic Foundation
John C. Rabets, urology
Natasha Singh, neurological surgery

OREGON
Portland
Oregon Health Sciences University Hospital
Maeran Chung Landers, dermatology

PENNSYLVANIA
Abington
Abington Memorial Hospital
Theera Vachranukunkiet, medicine (preliminary)

Allentown
Lehigh Valley Hospital
Stanley R. Angus, obstetrics-gynecology
Melissa Martinez-Guzman, obstetrics-gynecology

Lancaster
Lancaster General Hospital
Janet T. Bogen, family practice

Philadelphia
The Children's Hospital of Philadelphia
Seeta D. Badrinath, pediatrics
Steven M. Brunelli, pediatrics
Ralph J. DeBerardinis, Jr., pediatrics
Amanda J. Derryck, pediatrics
Gary Frank, pediatrics
Malaka B. Jackson, pediatrics
Clare O'Leary McMillan, pediatrics
Nicole A. Nemeth, pediatrics

Hospital of the University of Pennsylvania
Kevin K. Anbari, orthopaedic surgery
Roland Biron, oral-maxillofacial surgery
Robert G. Brummett, pathology
Jonathan Cryer, otolaryngology
Kevin J. Duffy, Jr., internal medicine
Marc Eisen, otolaryngology
Judith K. Evans, pathology
Nader M. Hebela, orthopaedic surgery
Wendy Hsu, radiology-diagnostic
Benjamin M. Jackson, general surgery
Maren E. Jeffery, internal medicine
Deepak Kademani, oral-maxillofacial surgery
Kamiar Khajavi, internal medicine
Mireille A. Moise, general surgery
Jennifer A. Oakes, psychiatry
Clifford S. Perlis, urology
Glenn M. Polin, general surgery
Michael P. Riley, internal medicine
Marisa Z. Rose, obstetrics-gynecology
Arturo P. Saavedra, dermatology
Adam C. Schaffer, internal medicine
Alyson Cook Solomon, pathology
David A. Tavares, anesthesiology
Arthur D. Thomas, urology
Karen S. Tompsett, dermatology
Liana Vesga, internal medicine
Craig Vigliante, oral-maxillofacial surgery
Courtney A. Woodfield, radiology-diagnostic

MCP Hahnemann University Hospitals
Vonzella A. Bryant, emergency medicine

Pennsylvania Hospital
Geoffrey K. Aguirre, medicine (preliminary)
Marybeth U. Allian-Sauer, medicine (preliminary)
Genesis A. Bowen, obstetrics-gynecology
Brian P. Brennan, medicine (preliminary)
Thomas J. Dilling, medicine (preliminary)
Noam Y. Harel, medicine (preliminary)

Scheie Eye Institute, University of Pennsylvania
Gabrielle R. Bonhomme, ophthalmology
Leonard Feiner, ophthalmology

Thomas Jefferson University
Daniel M. Farber, emergency medicine
Kara White Greeley, family practice
Sigrid A. Larson, family practice
Erica D. Penny-Peterson, internal medicine

University of Pennsylvania Medical Center / Shadyside
Alison T. O'Brien, family practice

Wills Eye Hospital
Karen S. Nipper, ophthalmology

Pittsburgh
University of Pittsburgh Health Center
Justin C. Chura, obstetrics-gynecology
Robert J. Stein, surgery (preliminary)
Jeong Yeon Whang, internal medicine

RHODE ISLAND
Providence
Rhode Island Hospital of Brown University
Noah M. Cook, pediatrics
Blayne H. Cutler, medicine-pediatrics
Michael Ganetsky, emergency medicine

TEXAS
Dallas
University of Texas-Dallas
Kelly K. Siu, ophthalmology

Galveston
University of Texas Medical Branch-Galveston
Milan G. Mody, orthopaedic surgery

San Antonio
Lackland Air Force Base / Wilford Hall Medical Center
Katherine (Lisa) Pagano, obstetrics-gynecology

VIRGINIA
Charlottesville
University of Virginia
Peter I. Ellman, general surgery

Richmond
Medical College of Virginia
Nancy M. Chung, dermatology

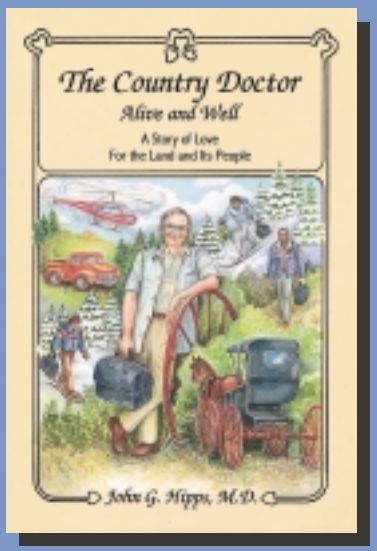
Country Values

John G. Hipps, M.D. '53, is a country doctor and he doesn't care who knows it. Actually, he *wants* you to know it, which is why he's published *The Country Doctor Alive and Well: A Story of Love for the Land and Its People* (1999). Written in collaboration with his wife, Barbara A. Smith, *The Country Doctor* consists of reminiscences, opinions, and health tips drawn from Hipps's 40 years of experience.

Without apology, Hipps writes in his Author's Note that "The sequence of stories has no rhyme nor reason other than to share what I hope will enlighten and amuse." No surprise, then, that he begins his book with a prelude, a fantasy in which a country doctor from the 19th century appears out of the Appalachian mist driving a horse and buggy – and symbolically passes the reins to young John. The first chapter of the book then details Hipps's time aboard the U.S.S. *Colbert* in the South Pacific during the Second World War. Next comes the first of Hipps's brief medical "Interludes," this one devoted to anxiety, which he describes as "a naturally occurring requirement for membership in the human race." From that point on, we are in the thick of this thick book (368 pp.), largely devoted to the people he's met as a country doctor.

For example, we hear about driving Chunker, Hipps's old four-wheel-drive pickup, along winding roads among the Allegheny Mountains to tend to "Big George" in his farmhouse:

> I found Big George in his country-cool bedroom buried under an even bigger mountain of country quilts. I knew he was in there somewhere from the clouds of water vapor that hovered over an opening near the topmost blanket. Ordinarily he would not have consented to a house call. . . . Big George was happy enough to see me that day after all. He was too weak to complain and unable to resist the penicillin shot destined for his bare backside.



Eventually, Hipps adds a helicopter to his array of vehicles, especially when traveling between his main "valley" office in northwestern Pennsylvania to one of his three satellite offices – but the people he meets and the relationships he builds are much the same. A case in point: Harley, "never much of a complainer," whose arms are dangling loosely in front of him while his face contorts with pain. "Sometimes it's a trick and a challenge to evaluate a patient's pain," writes Hipps. "To make sense of it includes assessing the victim's personality. If I know the patient, the task is an easy matter. If I don't, I rely on my experiential intuition. Whiners and groaners are one type, stoics and tough-guys another."

Hipps also takes time to notice – and write about – the natural surroundings. After all, that's part of being a *country* doctor. On his way to Millie and Roy Johnson's old white farmhouse, for instance, he notices what April has wrought: "Dark-brown seed pods of cat-o'-nine-tails had changed color to a fluffy light tan. They resembled large, woolly caterpillars about to shed their insulated underwear that would become a part of the new year's bird nests. The rains of the prior few days were nourishing an explosion of wildflowers." At times, especially when observing nature, Hipps's tone may seem overly rapturous or sentimental, but it's a good bet that he prefers it that way.

Hipps's website (www.thecountrydoctor.com) now includes a down-to-earth newsletter on health issues. Book and newsletter spring from the same impulses, among them common sense (which Hipps calls "that most uncommon of all senses") and a respect for the medical traditions that have worked. For example, he asserts that "The first and most important part of dealing with health and diseases is to talk with and listen to the patient. . . . I am more convinced today than ever that a proper history of the patient's complaint and the physical examination can take care of ninety percent of all health problems." Most important, however, is the impulse to preserve and cherish the spirit of caring and the patient-doctor bond in a time when baleful influences like "the cancerous growth . . . of managed care" make it more difficult. As Hipps puts it in his book, "It is my belief that today's doctors – no matter their specialty, no matter where and what they practice, no matter how they are managed – can nurture the caring, compassionate spirit that, in elder days, endeared the country doctor to the hearts of his patients."

– John Shea

Progress Notes

compiled by Marlene B. Shoeman

Send Your Progress Notes to:
Office of Medical Alumni Relations
University of Pennsylvania
Medical Center
3535 Market Street
Suite 750
Philadelphia, PA 19104-3309

40's

Anne W. Phillips, M.D. '43D, Westwood, Mass., received the Burn Prevention Award from the American Burn Association for her work in teaching young and old how to prevent fires and what to do in a fire to increase the chances of survival.

Henry Brown, M.D. '44, G.M.E. '48, Waban, Mass., retired associate clinical professor of surgery at Brigham and Women's Hospital, is one of the authors of "Anatomy and Blood Supply of the Lower Four Cranial and Cervical Nerves: Relevance to Surgical Neck Dissection." It is the result of a collaborative study done at Harvard; l'Institut d'Anatomie, UER Biomedicale Academie of Paris, Université Réné Descartes; and the Department of Anatomy of the University of Buenos Aires, Argentina.

John A. Buesseler, M.D., G.M. '49, was honored during the graduation exercises at Texas Tech University Health Sciences Center. He was named Founding Dean and Vice President for Health Affairs and Health Sciences Emeritus "in recognition of distinguished and faithful service, visionary leadership, and standards of academic and clinical excellence." Buesseler, who served his Penn residency in ophthalmology, was appointed dean, vice president, and CEO at Texas Tech in 1970, becoming the first full-time employee, faculty member, and administrator at the School of Medicine. In the course of his career there, he also served as chair of the Department of Ophthalmology and of the Department of Health Organization Management and was named University Professor in 1973. Before joining Texas Tech, Buesseler was founding chief of ophthalmology at the University of Missouri School of Medicine.

50's

Tsung O. Cheng, M.D., G.M. '56, professor of medicine at the George Washington University, was elected a Fellow of the Royal Society of Medicine in London. The society promotes the exchange of information and ideas on the science, practice, and organization of medicine and allied health-care professions. Cheng also reports that he was a contributor to *Medicine in Quotations*, recently issued by the American College of Physicians.

Darwin J. Prockop, M.D. '56, formerly a professor of biochemistry at MCP Hahnemann University School of Medicine, has moved to Tulane University with his gene-therapy program. Tulane and Columbia/HCA, which manages Tulane University Hospital, expect 12 to 15 people to join Prockop. His team has developed a technique to use a patient's own bone-marrow cells as a vehicle for inserting modified genes. According to Warren E. Ross, dean of Hahnemann's medical school, Hahnemann will continue to work with Prockop on developing the intellectual-property rights and commercializing the activities.

Richard Janeway, M.D. '58, Winston-Salem, N.C., professor of medicine and management at Wake Forest University and emeritus executive vice president for health affairs there, received the university's highest award, the Medallion of Merit, during Founder's Day Convocation.

Andre C. Blanzaco, M.D. '59, was elected president of the Montgomery County (Pa.) Medical Society for 2000-2001. He practices obstetrics and gynecology at Chestnut Hill Hospital and Montgomery Hospital Medical Center.

60's

John W. Kreider, M.D. '63, who had been a professor of pathology at the Milton S. Hershey Medical Center of the Pennsylvania State University, has retired. He had been associated with the Jake Gittlen Cancer Research Institute.

Paul Silverstein, M.D. '64, Oklahoma City, reports that he continues to practice full time as a plastic and reconstructive surgeon. In June, he resigned as medical director of Integris Baptist Burn Center, which he founded and had directed for the past 25 years. The center has been renamed in his honor. This spring, he was named "Phi Beta Kappa of the Year" by the Oklahoma City Chapter of Phi Beta Kappa. His e-mail address is: psilver711@aol.com.

John F. Ditunno Jr., M.D., G.M.E. '65, is director of the Spinal Cord Injury Center at Thomas Jefferson University Hospital in Philadelphia. The center, affiliated with Magee Rehabilitation Hospital, is one of 18 regional Research Spinal Cord Injury Centers in the nation.

Benjamin H. Natelson, M.D. '67, professor of neurosciences at the University of Medicine and Dentistry–New Jersey Medical School, is director of one of three Chronic Fatigue Syndrome Cooperative Research Centers established last year by the National Institute of Allergy and Infectious Diseases. The recent focus of the center Natelson heads, in Newark, N.J., is an attempt to characterize heart and nervous system abnormalities in subsets of persons with CFS.

Patricia A. Gabo, M.D. '69, CEO of Denver Health Medical Center, has won this year's national Dr. Nathan Davis Award for "Career Public Servant at the Local Level." The award, presented by the American Medical Association, is named for the association's founder. It is presented for outstanding contributions "to promote the Art and Science of Medicine and the Betterment of the Public Health."

70's

Anne B. Wong, M.D. '76, M.B.A., is medical director of perioperative services at the University of California at Irvine Medical Center in Orange. She also serves as clinical associate professor of anesthesiology and clinical director of the Department of Anesthesiology.

Lewis A. Lipsitz, M.D. '77, physician-in-chief and vice president of medical affairs at Hebrew Rehabilitation Center for Aged, was promoted to full professor of medicine at Harvard Medical School. He also holds the Irving and Edyth S. Usen Chair in Geriatric Medicine at the center, serving as director of research. He is known for his landmark studies of falling and fainting among the elderly.

John Dewar, M.D. '78, and **Sandra M. McCloy**, M.D. '78, a husband-and-wife team practicing family medicine in Canton, N.Y., were honored by the Health Science Center at Syracuse College of Medicine. They received the President's Award for Voluntary Faculty Service for contributing more than 9,500 hours of exemplary volunteer instruction through the Rural Medical Education Program, which is designed to alleviate the shortage of rural primary-care physicians. The award notes that they "have set the standard for excellence in the lives of these Family Practice students."

Wayne L. Goldner, M.D. '78, is the subject of *Live Free or Die*, a documentary produced by Cine Qua Non Films, which

was shown in June as part of the Human Rights Watch International Film Festival. In September, the film aired nationally on the PBS program *Point of View*. *Live Free or Die* explores why, despite violence and harassment, some physicians continue to provide abortions. In search of an answer, the filmmakers followed Goldner, a New Hampshire obstetrician / gynecologist, fighting on the latest front of the "abortion wars." They conclude that physicians like Goldner often stop providing abortions because of the profound sense of isolation they endure. According to the film, it is a lack of social support for providers, more than violence, that has left 86 percent of counties in the United States without abortion services.

80's

Ronald M. Summers, M.D. '85, Ph.D., received a Presidential Early Career Award for Scientists and Engineers in April. Recipients receive up to a five-year research grant to further their studies. According to his certificate, Summers was recognized for "developing special radiologic visualization techniques such as virtual reality presentations that permit doctors and patients to better understand disease and better plan treatment." He is chief of the image-processing group at the NIH's Warren Magnuson Clinical Center in Bethesda, Md.

Darryl L. Landis, M.D. '89, Eden Prairie, Minn., has joined Ingenix, a subsidiary of UnitedHealth Group in Minneapolis, as medical director of informatics. He previously worked as medical director for United HealthCare of North Carolina.

90's

Robert A. Soslow, M.D. '91, has joined the faculty at Memorial Sloan-Kettering Cancer Center in New York City as an associate attending pathologist. Among his specific areas of interest are diagnostic immunohistochemistry, Mullerian serous carcinomas, terine mesenchymal lesions, and Barrett's esophagus. He recently finished writing chapters for the new edition of Knowles's *Neoplastic Hematopathology* and Dabbs's *Comprehensive Diagnostic Immunohistochemistry*.

OBITUARIES

Samuel M. Gilbert, M.D. '30, Maplewood, N.J.; May 4, 2000. Graduating first in his class, he received the Spencer Morris Prize for highest academic record. He did a postgraduate residency at Mt. Sinai in New York and studied under Dr. Burrill Crohn, the discoverer of Crohn's disease. Listed in *Who's Important in World Medicine*, Gilbert published in a number of journals. In 1956, he served as president of Penn's Alumni Club of Northern New Jersey.

Bernerd Caplan, M.D. '31, Elkins Park, Pa., a retired radiologist; March 21, 2000. He practiced medicine for 50 years, retiring in 1982 as chief of radiology at Northeastern Hospital in Philadelphia. During World War II, he served as chief of the Army Field Hospital in China.

Elwood T. Rees, M.D. '31, Twin Falls, Ind., a retired general practitioner; August 31, 1998.

Charles Nadel, M.D. '32, Scotch Plains, N.J.; January 1, 2000. An orthopaedist for more than 50 years, he served as the orthopaedic head and president of the medical and dental staffs at Irvington General Hospital. He had also served as medical director of the Cerebral Palsy Treatment Center of Newark, West Essex, and Belleville and as medical director of the United Cerebral Palsy League of Union County. He introduced surgery and the use of the Harrington Brace technique throughout New Jersey to treat scoliosis. Nadel served as president of Penn's Alumni Club of Northern New Jersey in 1962.

Joseph B. Cady, M.D. '34, Waverly, Pa.; September 18, 1999. Following his internship at Robert Packer Hospital, he spent three years as a resident at the Mayo Clinic before joining the staff at the Guthrie Clinic in Sayre, Pa. During World War II, he was chief of staff at the 98th General Hospital in Munich. He retired from the Army as a colonel in 1945 and rejoined the staff at Guthrie. At his retirement in 1972, he was chief of medicine. He served as president of the Pennsylvania Heart Association in 1954-55.

Clifford C. Baker, M.D. '35, Vero Beach, Fla.; April 4, 2000. After completing a residency in radiology at Penn in 1942, he served on active duty in the Navy until 1944. He was in the Naval Reserve until 1970 when he retired with the rank of commander. From 1952 to 1970, he was chief radiologist at Yonkers General Hospital in Yonkers, N.Y., while having a private practice in Scarsdale. He was chief radiologist at Nantucket Cottage Hospital from 1971 to 1994.

Fred D. Fister, M.D. '36, Allentown, Pa., a general practitioner; March 24, 2000. A member of the former Allentown General Hospital staff since 1937, he had been medical director, director of medical education, and ombudsman. In 1970, he became chairman of the board and director of the home care department. He also served as director of medical education at Lehigh Valley Hospital from 1973 to 1977. During the Korean War, he was a flight surgeon with the 68th All-Weather Fighter Interceptor Squadron.

Lyster M. Gearhart, M.D. '36, Allentown, Pa., a retired obstetrician / gynecologist; January 26, 2000. He was in private practice for many years, delivering more than 3,000 babies before retiring. He served in the Army during World War II. He helped found Planned Parenthood of Lehigh County in 1970. He was a member of the American College of Surgeons and the American College of Obstetrics and Gynecology.

Norman L. Cannon, M.D. '37, G.M. '40, Wilmington, Del.; March 19, 2000. After serving internships in Missouri and Delaware, he completed his residency in urology at the Graduate Hospital in 1942. From 1942-1946, he served with the Army Medical Corps in Europe and was discharged with the rank of major. After military service he returned to Wilmington and opened his urology practice. In 1968, he reduced his private practice to become vice president for medical affairs at the Wilmington Medical Center, a position he held until retiring in 1979.

Agnew R. Ewing, M.D. '37, Naples, Fla., a retired physician; February 29, 2000. During World War II, he served in the Army medical corps in the South Pacific. After the war, he returned to West Grove, Pa., to practice. For 16 years in the 1950s and '60s, he served as mayor of West Grove.

Morris Martin, M.D. '37, Springfield, Ohio, a retired internist; January 20, 2000. He interned at the Ohio State University Hospital. A veteran of the U.S. Army Air Corps, he served as flight surgeon during World War II. Martin specialized in internal medicine, beginning his practice in Springfield in 1946, and served as chief of staff at Community Hospital and Mercy Medical Center.

Joseph A. Wagner, M.D. '38, Newtown Square, former clinical professor of medicine and associate professor of cardiology at Penn; February 21, 2000. Former president of the medical staff at Bryn Mawr Hospital, he had also been associate professor of medicine at Thomas Jefferson University. From 1967 to 1974, he was the principal investigator of the Coronary Drug Project for the NIH. Wagner also helped to

establish a program for cardiac surgery at Bryn Mawr Hospital. As a medical missionary, he had served with the CARE-MEDICO program in Afghanistan; the United Presbyterian foreign mission in South Korea; and Project Hope in Brazil. A former president of the American Heart Association, he also had served as chairman of the American College of Physicians.

Seymour S. Kety, M.D. '40, emeritus professor of neuroscience at Harvard Medical School; May 25, 2000. After completing his internship at Philadelphia General Hospital, Kety was a National Research Council fellow at Harvard University and Massachusetts General Hospital. From 1943 to 1948, he was first an instructor and then an assistant professor in Penn's Department of Pharmacology. Until 1961, he was a professor of clinical physiology at the Graduate School of Medicine of the University of Pennsylvania. In that time, he was also scientific director and then chief of clinical science at the National Institute of Mental Health. In 1961 he was appointed the Henry Phipps Professor and Chairman of Psychiatry at the Johns Hopkins University School of Medicine. From 1967 to 1981, Kety was professor of psychiatry at Harvard, followed by two years as professor of neuroscience there. He subsequently resumed his association with the National Institute of Mental Health, serving as associate director of its intramural research programs and then as senior scientist. A member of the editorial board of several professional journals, Kety served as editor-in-chief of the *Journal of Psychiatric Research* from 1959 to 1983. He received several honorary degrees, including ones from Penn, Harvard, Washington University, and the University of Michigan. Among his many awards are the Jessie Stevenson Kovalenki Award from the National Academy of Sciences (1973); the William C. Menninger Award from the American College of Physicians (1976); the Distinguished Service Award from the American Psychiatric Association (1980); the National Academy of Sciences Award in the Neurosciences (1988); and the Karl Lashley Award in Neuroscience from the American Philosophical Society (1992). Penn presented him with its Distinguished Graduate Award in 1985. Last fall, he received the 1999 Lasker Award for Special Achievement in Medical Science, honored for "a lifetime of contributions to neuroscience – including discovery of methods for measuring cerebral blood flow that led to current brain imaging techniques, studies of adopted individuals with schizophrenia that established the importance of genetics in causing the disease, and visionary leadership in mental health that ushered psychiatry into the molecular era."

John E. Maley, M.D. '41, G.M. '47, Webster Township, Mich.; September 27, 1999. During World War II, he was a medical officer in Kentucky and Europe. He retired from the University of Michigan Health Service in 1981.

John C. Lungren, M.D. '42, Long Beach, Calif.; February 28, 2000. After training at Los Angeles County Hospital, he served in the Army as an infantry battalion surgeon in the Normandy invasion in 1944. He was awarded four battle stars and a Purple Heart. In 1946 he joined Long Beach Memorial Medical Center, where he stayed until retiring in 1987. He was the personal physician of former President Richard Nixon from 1952 until 1969.

George J. Wright, M.D. '42, Pittsburgh; January 2, 2000. He completed an internship at St. Francis Hospital in Pittsburgh. He served for three years in World War II as a captain in the Army Medical Corps before training at the New York Neurological Institute at Columbia University and at Cornell University's Payne Whitney Clinic. He also trained in both neurology and psychiatry at Harvard University. In the 1950s Wright taught neurology at the University of Pittsburgh. He retired in 1989. One of his sons is **George J. Wright III**, M.D. '71, G.M.E. '75, also a neurologist.

Daniel H. Barol, M.D. '44, Philadelphia; April 24, 2000. In the U.S. Army, he served in hospitals in France and Germany. In 1948 he joined the staff of The Children's Hospital of Philadelphia and was later affiliated with Pennsylvania Hospital. In the 1970's he pursued a law degree at Temple University at night, earning his degree in 1978. He was a medical-legal consultant until the mid-1990s. He also had a private pediatric practice for 35 years until his retirement in 1986.

Henry D. Cornman, M.D. '44, Gladwyne, Pa.; March 1, 2000. A member of the staff of Bryn Mawr Hospital for more than 40 years, he also served at the old Blockley Hospital at the University of Pennsylvania and at Pennsylvania Hospital. He retired in 1992. Fond of sailing, he served as physician for the *Gazella Primera*, a Philadelphia tall ship, and was on board during her trip up the Hudson River for the 1976 bicentennial celebration in New York.

Leonard N. Hallinger, M.D. '45, Sarasota, Fla., a retired gastroenterologist; February 22, 2000. He practiced in West Chester, N.Y., until his retirement in 1993. He was a veteran of the Army Air Forces.

Herbert K. Cooper Jr., M.D. '47, Lancaster, Pa.; March 10, 2000. After completing an internship at Lancaster General Hospital, he served in the Korean War as a U.S. Army medic. He began his medical practice in 1953 in Lancaster. A specialist in diabetes and cardiology, he founded the Lancaster Chapter of the American Diabetes Association. In recognition of his service, the Lancaster chapter sponsors an annual lecture in his name. A former director of the Cleft Palate Clinic of Lancaster, he was the medical director of Educators Life Insurance Company for more than 30 years.

John Dewey Alexander Jr., M.D. '49, a former clinical assistant professor of medicine at Penn; February 20, 2000. He served in the Army during WW II and in the Air Force during the Korean War. He became an instructor at Penn in 1957, advancing to associate in medicine in 1962, clinical associate in medicine in 1963, and clinical assistant professor in 1980. He retired in 1990. He was a fellow of the American College of Physicians.

Richard Allen, M.D. '49, Harrisburg, Pa.; November 12, 1999. A pediatrician for 50 years, he had been chief of services in Polyclinic Hospital's pediatrics department, a staff member at Harrisburg and Holy Spirit hospitals, and a clinical assistant professor of pediatrics at Hershey Medical Center. During the Korean War, he was a first lieutenant in the Army Medical Corps. He was a fellow of the American Academy of Pediatrics.

Frederick N. Waltzer, M.D. '49, Wyncote, Pa.; January 24, 2000. After doing a residency at Abington Memorial Hospital, he served in the Army Corps in Germany from 1951 to 1953. He maintained a private practice in addition to being a member of the staff of Abington from 1957 until his retirement in 1989. Honored by the Chapel of the Four Chaplains in 1985, Dr. Waltzer was also honored in June 1999 as a 50-year member of the Montgomery County Medical Society. He was also president of the Old York Road Community Concerts. Besides orchestral music, his interests included opera, travel, reading, and following sports.

Jack Weiner, M.D., G.M. '50, Jenkintown, Pa., a former assistant clinical professor of dermatology at Penn; April 1, 2000. A graduate of Temple Medical School, he taught at Penn from 1968 to 1984. He retired from

practicing medicine last year at the Department of Dermatology of Albert Einstein Medical Center. He served overseas during World War II as an Army captain and treated survivors of the concentration camps at the end of the war.

Anna C. Wollack, M.D. '50, Westbrook, Conn.; January 19, 2000. She was the co-founder of the Saybrook Convalescent Hospital in Old Saybrook, Conn., where she was medical director and served on the board of directors. Earlier, she had had a general practice in Deep River, Conn., and Cleveland.

David M. Seymour, M.D., '53, New Castle, Pa., a former medical missionary in Africa for 32 years; February 18, 2000. He was born in Paris, France, of missionary parents. After earning his medical degree, he had an internship and one year of surgical residency at Binghamton City Hospital in New York. He was ordained a Baptist minister in 1955. He and his wife, Ruth, arrived in French Equatorial Africa in 1956, then moved to the Chad territory, where they began their lives' work in the town of Koumra. Seeing as many as 940 patients in one day, he began a practical training program for nurses and midwives. Over the years, hundreds graduated from his program and ran small health centers all over southern Chad, ministering to medical and spiritual needs of poor people. After retiring in 1989, Seymour returned yearly for a month or so to the medical center he had established in Chad.

Richard N. Myers, M.D. '54, Loris, S.C., a surgeon; December 31, 1999. He served in the U.S. Navy as a lieutenant commander from the late 1950s to the early 1960s. He completed his internship and residency at Lankenau Hospital in Philadelphia and remained on staff from 1961 to 1980 before leaving to practice surgery in Louisville.

William M. Glantz, M.D. '55, Davie, Fla., a retired urologist; January 15, 2000.

James R. Ramsay, M.D. '56, Orange Park, Fla., a retired family practitioner; November 29, 1999. He completed his internship at the University of Utah Hospital, then served as a captain in the U.S. Air Force stationed in Europe, where he was in charge of a large clinic for dependents. At Kansas State University and the University of Oklahoma, he taught human anatomy and the physiology of exercise. He then joined the medical faculty at Dartmouth College and served as team physician for the college athletes. An original member of the Ivy Team Physicians' Organization, he worked to make face masks mandatory for all collegiate ice hockey players. For several summers, he practiced medicine at Indian reservations in Montana, New Mexico, Oklahoma, and South Dakota. Following private practice in Mississippi and Georgia, he became medical director of the ambulatory care clinic at Winn Army Community Hospital at Fort Stewart, Ga. In 1992, he was named Medical Director of the Year. From 1994 until his retirement in October 1999, he served as medical director of the primary-care clinic at Naval Air Station Hospital in Jacksonville, Fla.

Leon J. Weiner, M.D., G.M. '58, Meadowbrook, Pa., an internist; February 7, 2000.

FACULTY DEATHS

Seymour S. Kety, M.D. See Class of 1940.

G. Christian Overton, Ph.D., the founding director of Penn's Center for Bioinformatics; June 1, 2000, from complications arising from cardiomyopathy. An internationally recognized pioneer in genomic research, he joined Penn in 1991 as a research associate professor of genetics in the School of Medicine. In 1997 he became an associate professor and director of the new center, an interdisciplinary venture among the Schools of Medicine, Arts and Sciences, and Engineering and Applied Science. He also held a secondary appointment in the Department of Computer and Information Science in the engineering school. Donations can be made to the G. Christian Overton Cardiovascular Research Fund, University of Pennsylvania Medical Center Development, 3535 Market Street, Suite 700, Philadelphia, PA.

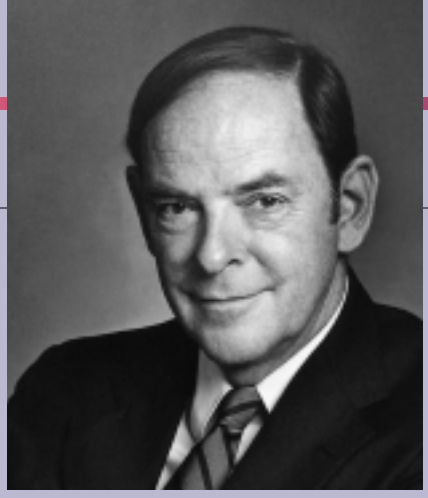
Virginia S. Ronk, M.D., Lansdowne, former assistant professor at Penn; February 21, 2000. She received her master's degree in biochemistry from the University of North Carolina and her medical degree from McGill University in Montreal in 1947. She served as director of Riverview Nursing Home in Philadelphia until her retirement in 1989.

Irvin Stein, M.D., Boca Raton, Fla., former professor of orthopaedic surgery; February 3, 2000. He received his medical training at Jefferson Medical College in Philadelphia and did his intern and resident training at Johns Hopkins University Medical Center and at Penn. For the next five decades, he taught orthopaedic surgery to many generations of medical students and orthopaedic residents at Penn as a clinical professor and, more recently, as emeritus professor. According to the *University of Pennsylvania Orthopaedic Journal*, "In his term as professor on the orthopaedic staff at the University, he was an inspiration to the students, residents, and staff associated with him, always seeking to delve deeply into the basis for clinical disability." Stein had been chief of orthopaedic surgery at the Philadelphia General Hospital and, from 1962 to 1972, chair of orthopaedic surgery at Albert Einstein Medical Center. He was the primary author of a textbook, *Living Bone in Health and Disease*, published in 1955, on bone metabolism and physiology. He and his wife established the Irvin and Dorothy Stein Visiting Professorship at Penn. Stein once served on the board of the Philadelphia Orchestra.

Joseph A. Wagner, M.D. See Class of 1938.

Jack Weiner, M.D., G.M. See Class of 1950.

John R. Williamson, D. Phil., professor of biochemistry and biophysics; February 3, 2000. A graduate of Oxford University with B.A. and M.A. degrees in biochemistry / pharmacology, he also received his D.Phil. there, doing doctoral research with Dr. R. B. Fisher. Following a postdoctoral fellowship at Oxford with Sir Hans Krebs, he joined the Baker Clinic Research Lab at Harvard Medical School as a research fellow with Drs. Albert Reinold and G. F. Cahill. In 1963, Williamson was recruited by Dr. Britton Chance to Penn's Johnson Research Foundation as a research associate. He was appointed assistant professor of biochemistry and biophysics in 1965 and became a full professor in 1975. Williamson published more than 300 articles in scientific journals. His early research made a range of discoveries and key descriptions of cellular bioenergetics and regulation of intermediary metabolism; he later focused on molecular mechanisms of hormonal signal transduction. Chair of the biochemistry graduate group from 1993 to 1997, he also served on a number of editorial boards of scientific journals, including the *Journal of Biological Chemistry* and *Biochimica Biophysica Acta*. He was a member of the Biochemical Society of the United Kingdom and the New York Academy of Science. ■



The Position of Leadership

When Peter G. Traber, M.D., resigned as CEO of the University of Pennsylvania Health System and interim dean of the School of Medicine in July, it was an unexpected culmination to a tumultuous academic year. Peter's departure certainly presented Penn with yet another challenge to overcome. President Judith Rodin, however, has acted swiftly to restore stability to our institution by appointing Robert D. Martin, Ph.D., the interim CEO and myself the interim dean of the School of Medicine. Robert's may be an unfamiliar name to some of you, but he has made his presence felt since joining the Health System in 1997 as executive director of our primary-care network. Holder of a Ph.D. degree in economics, Robert most recently was chief operating officer of UPHS. He has also been the Health System's chief financial officer. Before coming to Penn, he served as chief administrative officer at the Mayo Clinic in Scottsdale, Arizona, and as treasurer of its board of directors. We are very fortunate to have someone of his diverse talents at the helm during this transitional period.

As for me, I have been a member of Penn's medical faculty since 1974, when I arrived to chair the Department of Neurology. I stepped down from that position in 1982; the next year I was named the Ruth Wagner Van Meter and J. Ray Van Meter Professor of Neurology. I became the Van Meter Professor Emeritus in 1997. A dozen years ago, I found myself in a situation similar to my current one when I was named acting dean of the School of Medicine and then acting executive vice president of the Medical Center, between the departure of Edward J. Stemmler, M.D. '60, and the arrival of William N. Kelley, M.D., in 1989.

I welcome this opportunity to reassure our alumni, faculty, staff, trainees, and students that Robert Martin and I are working closely together in these positions of trust. More than that, we will not hesitate to make the decisions that have to be made on our watch. To be frank, although our institution has made what President Rodin characterized as "great progress" in reducing its financial problems in the last fiscal year, we cannot afford to put pressing decisions on hold. For example, we will continue to pursue optimal clinical service lines, administrative reforms within the School of Medicine, and planning for projects on the site of the Civic Center. Make no mistake – we are as eager as everyone else to see more space for parking around the Medical Center campus!

David E. Longnecker, M.D., chair of anesthesia and the Robert Dunning Dripps Professor, continues to serve in two vital roles: chair of the Clinical Practices of the University of Pennsylvania (CPUP) and vice dean for professional services.

I would also like to thank Peter Traber for his service to the institution during this difficult transitional period – and throughout his entire tenure at Penn. Many of you have first-hand knowledge of Peter's integrity and skills in dealing with people since he arrived here in 1992, and I know you share my regret that our institution is losing an excellent researcher and administrator. We wish him well in his new position as head of clinical pharmacology and experimental medicine at GlaxoSmithKline, the new pharmaceutical firm created by the merger of Glaxo Wellcome and SmithKline Beecham.

Penn Med has had a single individual in the roles of dean and CEO almost continuously since 1986. Although Robert Martin and I are sharing the dean/CEO responsibilities during this interim period, it is our firm intent to preserve the unity of the position. In announcing Peter Traber's departure, President Rodin noted that the University will launch a national search to identify candidates for the combined position of CEO of the Health System and dean of the School of Medicine. As she put it, "We expect to recruit a person of national – indeed, international – stature" to fill the position. Dwight L. Evans, M.D., the Ruth Meltzer Professor of Psychiatry and chair of the department, has been named chair of the committee that will advise on the search for a new CEO/dean. In addition, the executive search firm of Spencer Stuart was recently hired to assist in the search.

There are several excellent reasons to have one person in the joint position, especially in today's volatile health-care marketplace. Having a vision of the entire system, Bill Kelley was able to make decisions affecting all parts of the institution in a timely and expeditious manner. Indeed, it is hard to imagine the development of Penn Med into an integrated academic health system without such united leadership. In other settings, where there may be co-equal heads of a hospital, a medical school, and a faculty practice, it could be something of a struggle to reach a consensus before moving forward.

It is safe to say that the role Bill Kelley pioneered here at Penn has served as a model for many other academic medical institutions, even when the precise titles involved are somewhat different from the ones Penn uses. Ralph Snyderman, M.D., for example, is chancellor for health affairs and president and CEO of Duke University Health System. William A. Peck, M.D., is executive vice chancellor for medical affairs and dean of Washington University School of Medicine in St. Louis. Our University's leaders believe that the combined position remains the best possible option as UPHS moves purposefully into the next decade.

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

Katherine A. High, M.D., professor of pediatrics, leads a team that has successfully treated hemophilia in dogs by using gene therapy. So far, clinical trials with humans have also been encouraging. At a time when gene therapy has come in for severe criticism, High's work has helped to revive the whole field. She is also a firm believer in collaboration: Her research effort draws upon experts from Stanford University, The Children's Hospital of Philadelphia, and the biotechnology company Avigen.

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