

PENN Medicine

SUMMER | 2006

**WANTED:
A HUMANIST
PROFESSIONAL**

**Fixing Jaws, Fixing Eyes
Arnold Ludwig's Way with Words
A Matter of FACTT**



What's Happened Since . . .

What a surprise! It turns out that events often happen quickly, developments occur, people move from one position to another. Sometimes, after we've dotted the last "i" in *Penn Medicine*, had it printed, and sent it out across North America, the people we've featured make a change. Here is an update on some recent stories we've run.

The cover story of our Fall 2005 issue was "Rx: Better Information Technology for Better Health," by Martha Ledger. Much of the focus was on Penn's attempts, through better information technology, to reduce costs, reduce medical errors, and improve the quality of care. Providing the national perspective on the opportunities – and challenges – involved in such an endeavor was David J. Brailer, M.D., G.M.E. '91, Ph.D. He had done his medical training at Penn as a Robert Wood Johnson Clinical Scholar and also earned his Ph.D. degree from The Wharton School. Brailer is an advocate of electronic health records and "interoperability" among information technologies, which he believes are seriously fragmented. Appointed National Coordinator for Health Information Technology in the U.S. Department of Health and Human Services in April 2004, he resigned earlier this spring.

According to a statement issued by Michael Leavitt, Secretary of Health and Human Services, "David has made significant progress in advancing the president's health IT agenda and laying the building blocks for future progress."

Brailer is expected to continue to serve as vice chairman of the American Health Information Community, an advisory organization, and as a consultant to HHS.

In that same issue, Helene D. Gayle, M.D. '71, G.M.E. '77, M.P.H., was featured in a short piece about the School of Medicine's 2005 Commencement. Gayle, who was then director of the HIV, TB, and Reproductive Health Program of the Bill & Melinda Gates Foundation, delivered the graduation address. Exhorting the Class of 2005 to action, she asserted that a medical degree is "one of the most powerful tools I know to enable you to make a difference." She was also the subject of a full-length article I wrote for our Winter 2003 issue, "Helene Gayle: Agent of Prevention," which described her work at both the Gates Foundation and, before that, the Centers for Disease Control and Prevention. Her focus was HIV/AIDS, which she called "the defining public health issue of our time."

In February, Gayle became president and CEO of CARE, the international poverty-fighting organization, which in its 2005 fiscal year spent \$514 million to support its programs. Announcing Gayle's departure from the Gates Foundation, Patty Stonesifer, its president, thanked Gayle for her "extraordinary leadership." According to CARE, its mission is "to tackle the underlying causes of poverty so that people can become self-sufficient. Recognizing that women and children suffer disproportionately from poverty, CARE places special emphasis on working with women to create permanent social change."

Lisa Hark, Ph.D., R.D., was featured in my editor's note for the April 2005 issue. At that time, she had just published (with Darwin Deen, M.D.) a book called *Nutrition for Life: The No-Fad, No-Nonsense Approach to Eating Well*

and *Reaching Your Healthy Weight*. Hark, director of the medical school's Nutrition Education and Prevention Program, is now host of a new series on The Learning Channel (TLC) called *Honey, We're Killing the Kids*. Hark visits families across the country and shows them how the children's unhealthy life styles are harming them. One of the features is a computerized sequence that suggests how the children will look as they age. Still, the show is not all grim, and the families attempt valiantly to switch from their diet of junk food.

Hark has also written another book with Deen, *The Whole Grain Diet Miracle* (DK Publishing, 2006).

The last item concerns Robert W. Miller, M.D. '46, who died on February 23. Miller, emeritus scientist at the National Cancer Institute, had sent an occasional note to *Penn Medicine*, such as a critique of our annual coverage of the 50 Year Class. He wanted us to tell more about "the high points in the lives/careers" of the alumni rather than the number of their grandchildren or their hobbies. That sounded good to me.

Miller joined the ranks of our authors when we published "A Wartime Student Remembers" (Fall 2002). He was very willing to make edits and to flesh out some of the events and characters in his early drafts. In his memoir, Miller gave a vivid sense of life at the School of Medicine during World War II, when the students were also civilians in the Army or Navy medical reserve. Miller described the faculty members who taught the students and the officers who trained them; breakfast en masse in the Palestra; posters that warned about V.D.; and the challenges of saluting properly.

We will include a more traditional obituary of Dr. Miller in our next issue. ▀

John Shea



8

PROFESSING HUMANISM *By NICOLE GADDIS*
Inspired in part by earlier Penn physicians, Paul Lanken, M.D., has taken the lead in bringing humanism to the School of Medicine's curriculum. One new program pairs students with chronically ill patients over their first three years of study.

Departments

- IFC EDITOR'S NOTE**
What's Happened Since . . .
- 2 VITAL SIGNS**
Still Going Strong: The Patient – and the Program
School of Medicine Rises to Third in Survey
Environment and Disease: What's the Connection?
Sad News from Botswana
A Center for Muscular Dystrophy Research
Honors & Awards
- 7 LETTERS**
- 34 DEVELOPMENT MATTERS**
The Board of Women Visitors
Recent Gifts
- 38 ALUMNI NEWS**
Progress Notes
- IBC THE LAST WORD**
Translational Medicine: Some First Steps

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22

PSYCHIATRIST AS WRITER, WRITER AS PSYCHIATRIST

By MARIE GEHRET AND JOHN SHEA

The impulse to rule, the connection between creativity and madness, the ways individuals shape their identities – these are among the fascinating and occasionally controversial topics of Arnold M. Ludwig's books. Then came a novel.



PONDERING PROFESSIONALISM

By JOHN SHEA

In the spring, the School of Medicine held a symposium featuring both Penn physicians and outside experts who have been prominent in the effort to foster professionalism. Said one of the panelists: "Altruism is non-negotiable."

14

16

TAKING ON TMD

By JENNIFER BALDINO BONETT

For patients with the excruciating facial pain of temporomandibular joint disorder, a prosthesis recently approved by the F.D.A. is a life-saver. It was developed by Penn's Peter D. Quinn, M.D., D.M.D.



SEEING STRAIGHT

By JON CAROULIS

Although misaligned eyes are often thought of as a condition that affects children, Nicholas Volpe, M.D., operates exclusively on adults with strabismus. The corrective surgery has psycho-social benefits as well.

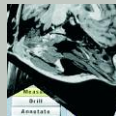
19

30

JONATHAN EPSTEIN ASSUMES DEPARTMENTAL CHAIR

By JOHN SHEA

Only weeks after receiving the Outstanding Investigator Award from a national organization, Jonathan A. Epstein, M.D., was named to lead the Department of Cell and Developmental Biology.



PENN NEUROSURGERY GOES THREE-DIMENSIONAL

By KATE OLDERMAN

Using a Dextroscope® to get a detailed visualization of the brain, Penn neurosurgeons can perform delicate surgery in a less invasive way.

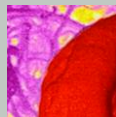
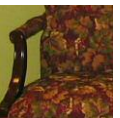
31

32

THE FINEST HOSPITAL CARE – WITH A DIFFERENCE

By NICOLE GADDIS

The Pavilion at HUP offers extra amenities for the patient while complementing the hospital's nationally recognized care.



A MATTER OF FACT

By KAREN KREEGER

A research team at Penn has developed a new, super-sensitive blood test to detect abnormalities at a much earlier stage, when there are more treatment options.

33

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**Still Going Strong:
The Patient – and the Program**

The Hospital of the University of Pennsylvania recently celebrated the 40th anniversary of its first kidney transplant by inviting back the two brothers – recipient and donor – who went through the historic operation. During the celebration, Larry Kaiser, M.D., chair of the Department of Surgery and Surgeon-in-Chief for Penn’s Health System, announced the launch of the Transplant House initiative. According to Kaiser, it is “a courageous effort by our transplant program to provide an affordable haven for patients, and their families and friends, to find privacy and rest.” It would be the first such facility in the City of Philadelphia.

It was in 1966 that Clyde Barker, M.D., former chair of surgery, bravely attempted to transplant a kidney from a living donor, Joe Mehl, into his 20-year-old brother, Howard. Four decades later, the brothers are still doing well, and Howard is now the longest-surviving kidney-transplant recipient with a working graft in Pennsylvania.

It’s a track record that still impresses many in the medical field. Although the science is widely taken for granted today, transplantation was extremely risky in the 1960s. Live, or heart-beating, donors were rare; and the standards for “brain death” were not defined until 1981, which meant that many organ donations came from cadavers. In addition, there was no commonly available tissue-typing test. “What was used at HUP could have been called ‘home-made,’” Barker said. He also noted that only two immunosuppressive drugs were available, and only one of them – steroids – is still used.

Things have moved forward considerably since then. Modern immunosuppressive drugs have improved short-term results, and research is now focusing on making more potent and targeted agents as well as determining how best to taper

off medications for those transplant recipients who recover well.

In its annual survey of graduate and professional schools, *U.S. News & World Report* ranks the University of Pennsylvania School of Medicine third among all research-oriented medical schools in the nation. Last year, the school was ranked fourth. This is the ninth year in a row that Penn’s medical school has been listed among the top five schools in the country. The magazine weighs peer assessments, assessments by residency directors, research activity, student selectivity, and other factors.

Penn ranked in the top 10 in four of the specialty programs that *U.S. News* surveys: Internal Medicine (#5), Drug/Alcohol Abuse (#6), Women’s Health (#4), and Pediatrics (#2). The School of Medicine was also ranked 16th among medical schools for students going into primary care. This represents a significant advance,

because as recently as two years ago, Penn was ranked 46th in that category.

In a memo announcing the survey results to faculty and staff, Arthur H. Rubenstein, M.B., B.Ch., executive vice president of the University of Pennsylvania for the Health System and dean of the School of Medicine, wrote: “While it is important to remind ourselves that such reputational surveys must be kept in their proper perspective, it is always nice to be recognized so publicly for our successful efforts, and I congratulate you all for your contributions to this recognition.

According to the survey results, the top three medical schools are at Harvard University, Johns Hopkins University, University of Pennsylvania, followed by the University of California at San Francisco and Washington University in St. Louis in a tie for fourth.

off medications for those transplant recipients who recover well.

“One of the things we’re looking at as the future of transplant medicine is being able to identify patients who would tolerate transplanted organs without any immunosuppressive therapy,” said Abraham Shaked, M.D., Ph.D., chief of Transplant Surgery. “We also need to develop less-invasive diagnostic tests for determining the likelihood of organ rejection so that our patients will no longer need to have biopsies performed. And, of course, we

want to conquer the diseases that can cause organ failure, such as Hepatitis C, so that transplants would not be necessary.”

Besides celebrating the remarkable success of Howard Mehl’s transplant, the evening commemorated Penn’s transplant program. According to Arthur H. Rubenstein, M.B., B.Ch., executive vice president of the University of Pennsylvania for the Health System and dean of the School of Medicine, the “incredible dedication and skill” of the surgeons and health-care professionals make Penn’s

Joe and Howard Mehl, donor and recipient



Nicole A. Gandis

“the most comprehensive transplant center in the region.”

As Ali Naji, M.D., Ph.D., surgical director of the Kidney Transplant Program, explained, “Our transplant program is unique because of its relationship with basic scientists.”

“Donating an organ – it’s the most intimate of human exchanges,” Howard Mehl concluded. “You become part of a much larger family.”

— Nicole Gaddis

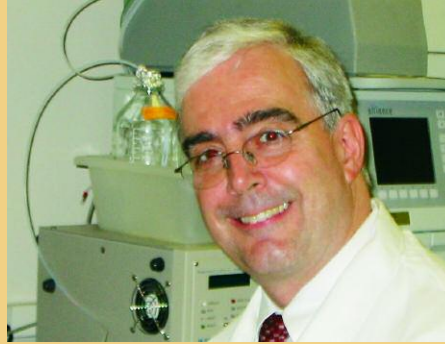
Environment and Disease: What’s the Connection?

Over the next four years, the School of Medicine will receive \$4.1 million from the National Institutes of Environmental Health Sciences to study the effects of environmental pollutants on human health. The new Center of Excellence in Environmental Toxicology (CEET) represents a partnership between research scientists and communities in southeastern Pennsylvania. Its mission is to understand the mechanism by which environmental exposures lead to disease. Understanding these processes can lead to early diagnosis, intervention, and prevention strategies. The goal will be to improve environmental health and medicine in the region.

The Penn CEET is one of 22 designated Environmental Health Science Centers in the United States and the first in Pennsylvania.

An area of interest will be to study the role of environmental exposure in lung disease, including cancer, mesothelioma, asthma, and emphysema. Researchers will also focus on how certain environmental triggers can disrupt the body’s endocrine and reproductive systems, causing problems such as pre-term birth and birth defects.

In addition to its research agenda, the center will have a major community outreach and education component. The five



Penning

local communities selected to be part of the effort are the Eastwick neighborhood in southwest Philadelphia; the neighborhood of West Philadelphia; Chester, in Delaware County; Pottstown, in Montgomery County; and Palmerton, in Carbon County, about 70 miles north of Philadelphia.

According to Trevor M. Penning, Ph.D., director of the new center, “The idea is to have two-way dialogues, to disseminate findings of the center to community leaders by way of workshops and other educational programs. We’re also looking for community leaders to tell us their environmental concerns. By working with communities, we can empower them with the knowledge to make changes in environment and public health policy.”

Penning, who is a professor of pharmacology, biochemistry and biophysics, and obstetrics and gynecology at the School of Medicine, notes that Penn is an ideal place for an environmental health sciences center because Pennsylvania is a highly polluted state: “Pennsylvania is considered to be the fourth-most polluted state in the country, by a series of different indices.” At the same time, Pennsylvania has the second-highest incidence of cases of cancer per 100,000 people.

Penn’s Center of Excellence in Environmental Toxicology will not be housed in a single building. Instead, it will draw on the expertise of 50 faculty members from 16 departments and five schools at the university, including the law and business schools. Penning points out that the scientific aspects of environmental exposure cannot be looked at in isolation. There are political, social, and health-care issues to deal with as well.

Edward A. Emmett, M.D., professor of occupational medicine, is the center’s deputy director.

In its efforts to study the interplay between environmental pollutants and genes, Penn researchers will look at questions such as what makes one person susceptible to disease and another not. “If two people breathe the same polluted air,” asks Penning, “why does one get asthma and one does not?”

— Karen Kreeger

A Change of Name

The Department of Family Practice and Community Medicine is now known as the Department of Family Medicine and Community Health. The department was instituted in 1994 and continues under the leadership of Marjorie A. Bowman, M.D., M.P.A., its founding chair. The department has grown to more than 40 physicians; each year, its specialists handle more than 35,000 outpatient visits, 400 inpatient stays, 180 deliveries, and home visits when necessary.

Sad News from Botswana

On March 19, Richard K. Root, M.D., former associate professor of medicine at Penn, was killed while on a two-month assignment as part of the Penn Program in Botswana. Root, 68, was on a guided canoe ride in the Tuli Nature Reserve when he was pulled from his canoe by a crocodile. His wife, Rita O’Boyle, was in another canoe and was unharmed. Root had come to Botswana to teach and provide medical care for HIV patients at Princess Marina Hospital. Most recently, Root was an emeritus professor and vice chairman of the Department of Medicine at the University of Washington. He had also been chairman of medicine at the University of California at San Francisco and chief of infectious diseases at Yale University School of Medicine. Earlier in

his career, Root came to Penn to form the infectious disease division of the Department of Medicine with Rob Roy MacGregor, M.D.

Although the Penn Program in Botswana has been a success since its founding in 2001 and more than 40 Penn residents and medical students worked in its clinical programs during the recent academic year, the countryside is very different from what many visitors are used to. According to the U.S. Embassy in Botswana: “Wild animals pose a danger to tourists. Tourists should bear in mind that, even in the most serene settings, the animals are wild and can pose a threat to life and safety.”

Donations can be made to the Richard K. Root Memorial Fund, c/o Harvey Friedman, M.D., Chief, Infectious Diseases, Director, Penn-Botswana Program, University of Pennsylvania, 502 Johnson Pavilion, Philadelphia, PA 19104-6073.

Fortunately, the Botswana program recently received positive news: the President’s Emergency Plan for AIDS Relief has made the School of Medicine a one-year grant of \$933,551 to support clinical and educational activities in Botswana. The money will be used to support Penn faculty, residents, and students as they treat, study, and research the AIDS epidemic in a nation where about 38 percent of adults between the ages of 15 and 49 are infected.

“Botswana is considered the test tube case in Africa regarding AIDS,” said Dr. Friedman. “This is one of the frontiers in HIV care, and I am proud that Penn is leading the way.”

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A Center for Muscular Dystrophy Research

Funded by a \$1 million grant from the National Institutes of Health and the Muscular Dystrophy Association, the School of Medicine has established one of only six Senator Paul D. Wellstone Muscular Dystrophy Cooperative Research Centers in the United States. The center at Penn is directed by H. Lee Sweeney, Ph.D., chair



Sweeney

The Muscular Dystrophy Association

of Penn’s Department of Physiology. Kathryn R. Wagner, M.D., Ph.D., of The Johns Hopkins School of Medicine, is co-director.

“This award will accelerate the pace of our translational work and provide a pathway to patient trials,” said Sweeney, the William Maul Measey Professor of Physiology. “It will also be the nucleus of a larger translational-research initiative for muscular dystrophies that I hope to catalyze at Penn.”

All six Wellstone Centers honor the memory of the late U.S. senator, a cham-

panion of muscular dystrophy research. In addition to the Muscular Dystrophy Association, they are funded by the National Institute of Arthritis and Musculoskeletal and Skin Diseases, the National Institute of Neurological Disorders and Stroke, and the National Institute of Child Health and Human Development.

Under Sweeney’s leadership, the Penn-based Center will focus on ways to increase muscle growth and examine compounds to inhibit enzymes involved in the degradation of muscle tissue. The core facility, located at Penn, will analyze muscular dystrophy animal models. Planned clinical trials, to be based at the N.I.H. in Bethesda, Md., will determine the safety and feasibility of a potential drug treatment for muscular dystrophy, which was first developed in Sweeney’s research lab. Other research sites contributing to the investigations directed by the Penn Center include Johns Hopkins and the University of Florida/Gainesville.

Match Day Mania

The N.C.A.A. tournament was not the only madness in March. On Match Day, the 159 students who would be graduating from the School of Medicine learned where they would be taking their residencies. They gathered in Dunlop Auditorium of Stemmler Hall. Then, one by

one, as their names were called, the students received their sealed envelopes from administrators, returned to their seats, . . . and tore open their envelopes to read the names of their residency programs.

Here, from left to right, Neil Wimmer, Jesse Goldstein, Rebecca Nerenberg, and Esti Schabelman celebrate their good news.



Katie Oldeman

A Generous Bequest

The Parkinson's Disease and Movement Disorders Center, part of the Penn Neurological Institute at Pennsylvania Hospital, has received a \$3.2 million gift from the estate of Mary A. Keetz, Ph.D. a pro-

fessor emeritus at West Chester University. Keetz suffered from Parkinson's Disease until her death in July 2004 at age 73.

"We are extremely grateful to Dr. Keetz for her vision, hope and generosity," said Matthew B. Stern, M.D., the Cen-

ter's director and the Parker Family Professor of Neurology at the University of Pennsylvania. The gift, he said, would be used to fund basic research to help us better understand the mechanisms of Parkinson's Disease.

Honors & Awards

Jo Buyske, M.D., chief of surgery at Penn Presbyterian Medical Center, has been appointed a director of the American Board of Surgery. Her primary responsibility is to help set standards for obtaining and maintaining certification in surgery and to administer the board's certification examinations.

David J. Casarett, M.D., assistant professor of medicine, fellow of the Institute on Aging, and physician at the Philadelphia VA Medical Center, is the first recipient of the William A. Nelson Award for Excellence in Health Care Ethics, presented by the National Center for Ethics in Health Care. Throughout his career, Casarett has promoted ethical health-care practices through his focus on understanding and improving the way patients make health-care decisions at the end of life.

Christopher M. Clark, M.D., associate professor of neurology, has been named to the Alzheimer's Association Early-Stage Professional Task Force. The national task force will focus on the unique challenges facing people with early-stage Alzheimer's disease and will help develop recommendations to increase their participation in the leadership and services offered by the Association. Clark serves as associate director of Penn's Alzheimer's Disease Center as well as director of the Memory Disorders Clinic. He is also director of the recently initiated Center of Excellence for Research on Neurodegenerative Diseases at Penn, and he is the

current principal investigator of a grant from the National Institute of Aging. His research interests focus on Alzheimer's disease and the development of diagnos-



Clark

tically specific markers, the identification and evaluation of new treatments, the development of new instruments to measure rates of change, and studies of the relationship between Parkinson's disease and Alzheimer's disease.

S. Walter Englander, Ph.D., the Jacob Gershon-Cohen Professor of Medical Science and professor of Biochemistry and Biophysics, has been elected to the American Academy of Arts & Sciences. Founded in 1780, the Academy has a broad-based membership of scholars and practitioners, which fosters interdisciplinary studies and public policy research. According to Patricia Meyer Spacks, president of the Academy, "Fellows are selected through a highly competitive process that recognizes individuals who have made

preeminent contributions to their disciplines and to society at large."

Englander is also a member of National Academy of Sciences as well as an Honorary Fellow of The Biophysical Society and of the American Association for the Advancement of Science. His laboratory studies protein structure, function, folding, misfolding, and amyloid. The study of protein folding, in particular, is expected to shed light on the errors in the process that can lead to such disorders as Alzheimer's disease, Huntington's-related diseases, and prion-related encephalopathies.

Susan S. Ellenberg, Ph.D., professor of biostatistics and associate dean for clinical research, is one of 17 scientists around the nation who have been selected as members of the first class of "Fellows of the Society for Clinical Trials." This recently established fellowship recognizes past and current Society members who have made significant contributions to the advancement of clinical trials. Ellenberg was honored in May at the Society's annual meeting.

Larry Kricka, Ph.D., professor of pathology and laboratory medicine and director of general chemistry at HUP, was named the winner of the 2006 Edwin F. Ullman Award for contributions that advance the technology of clinical laboratory sciences through the creation of new technologies and analytical methods. The award is presented by the American Association for Clinical Chemistry and sponsored by Dade Behring Inc. Two of Kricka's efforts have had a profound effect on the field of

laboratory medicine. He was instrumental in developing two of the three major chemiluminescent technologies currently used in routine testing, and he played an



Kricka

important role in adapting chemiluminescent and bioluminescent assays to point-of-care testing. Kricka's other main contribution to the field has been with miniaturization. In collaboration with Peter Wilding, Ph.D., Kricka played a critical role in developing micro-fabricated clinical analysis devices and devices that isolate cells, analyze DNA, test for fertility, assist in vitro fertilization, and integrate tests for malignancy.

Mitchell A. Lazar, M.D., Ph.D., the Sylvan H. Eisman Professor of Medicine and Genetics who serves as chief of the Division of Endocrinology, Diabetes, and Metabolism, was named to the advisory council of the National Institute of Diabetes and Digestive and Kidney Diseases. The advisory council meets three times annually to advise the Institute about its research portfolio and typically undertakes broad issues of science policy. An important role of the advisory council is to provide second-level peer review of grant applications that have been scored by scientific review groups.

Lazar, who is also director of the Institute for Diabetes, Obesity, and Metabolism,

appeared on *The Charlie Rose Show* on PBS in March as part of a panel of experts who discussed "The Diabetes Epidemic."

The Association of Bone & Joint Surgeons selected **Jess H. Lonner, M.D.**, director of knee-replacement surgery at Pennsylvania Hospital's Department of Orthopaedic Surgery, as the 2006 Knee Society Young Scholar. He received a scholarship to attend the Association's meeting in Buenos Aires, Argentina, in April, where he presented a scientific paper.

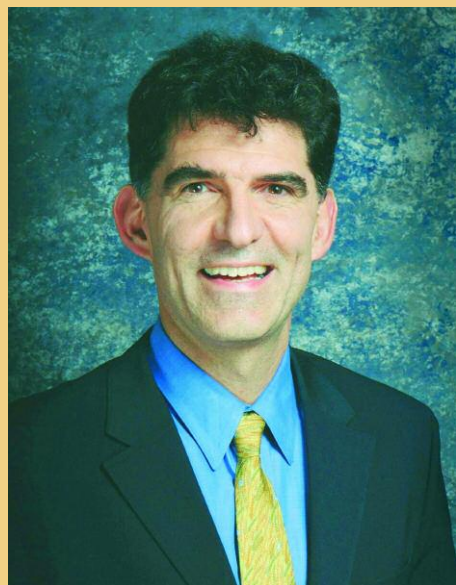
Andrew D. A. Maidment, Ph.D., chief of the physics section of the Department of Radiology, was elected a Fellow of the American Association of Physicists in Medicine. According to the Association, his fellowship is in recognition of "distinguished contributions" to the field.

Gail Morrison, M.D. '71, G.M.E. '77, vice dean for medical education, received the Daniel C. Tosteson Award for Leadership in Medical Education, presented by the Carl J. Shapiro Institute for Education and Research at Harvard Medical School and Beth Israel Deaconess Medical Center. The award is presented annually to an individual whose leadership has brought about significant innovation or improvement in undergraduate and/or graduate medical education. The recipient receives an honorarium of \$5,000 and delivers a lecture for the Shapiro Institute.

Aimee S. Payne, M.D., Ph.D., a clinical instructor and postdoctoral fellow in the Department of Dermatology, received one of the four 2006 Research Scholar Awards from the American Skin Association. The \$50,000 awards are made to "promising investigators conducting research in the causes, prevention, and treatment of skin diseases and cancers." Payne is studying genetic and molecular mechanisms of pemphigus in order to identify a cutaneous

autoimmune blistering disorder. The goal of her current project is to genetically characterize the immune response in pemphigus in order to identify novel and potentially safer antibody-targeted therapies for this life-threatening disorder.

Daniel J. Rader, M.D., the Cooper/McLure Associate Professor of Medicine, has received a Freedom to Discover Unrestricted Biomedical Research Grant from Bristol-Myers Squibb. He is one of only two scientists in the field of cardiovascular medicine to receive the honor in 2006. The



Rader

award includes \$100,000 per year for five years to support Rader's research. Rader is recognized for his translational research that applies basic research in pathways of cholesterol metabolism and atherosclerosis to the development of new therapeutic approaches to reduce the risk of heart disease. He is especially well known for his work on boosting HDL levels and function.

Rader serves as director of the Preventive Cardiovascular Medicine and Lipid Clinic, associate director of the Institute for Translational Medicine and Therapeutics, and program director of the General Clinical Research Center.

Kathryn Schmitz, Ph.D., M.P.H., assistant professor of epidemiology at the Center for Clinical Epidemiology and Biostatistics, is a recipient of the Trudy Bush Fellowship for Cardiovascular Research in Women's Health, sponsored by the American Heart Association. The award was presented in March during the 46th Annual Conference on Cardiovascular Disease Epidemiology and Prevention.

Colette Shen, an M.D./Ph.D. student, is among 30 Paul and Daisy Soros New American Fellows for 2006. The Soros Fellowships provide up to a \$20,000 stipend, plus half-tuition for as many as two years of graduate study, for the naturalized American citizens, resident aliens, or children of naturalized citizens who are selected. Shen, who was born in Los

Angeles of Taiwanese parents, graduated summa cum laude and Phi Beta Kappa from Harvard University in 2004, with a B.A. degree in engineering. At Penn, she is conducting research on angiogenesis. She



Shen

is interested in using the tools of engineering and physical science to help solve medical problems.

Paul Root Wolpe, Ph.D., senior fellow at the Center for Bioethics and a professor in the Department of Psychiatry, has been elected president-elect of the American Society for Bioethics and Humanities. He will assume the role of president in October 2006. The national professional organization for scholars in bioethics and the medical humanities has more than 1,600 members, including physicians, nurses, social scientists, legal scholars, historians, and philosophers. Wolpe, who serves as director of the Program in Psychiatry and Ethics at Penn's School of Medicine, is the first chief of bioethics for the National Aeronautics and Space Administration.

LETTERS

Open to Improvement

I read with interest your latest article on Health Information Technology ["Prescription: Better Information Technology for Better Health," Fall 2005]. I have a clinical practice in Orthopedics and also perform many independent medical exams and thus have to read massive numbers of chart notes. I was struck by two aspects of your article.

First, in my clinical practice I hear constant complaints from patients who come from practices that use computer charting. The complaint is always the same: "My doctor spends all her time looking at her computer screen and doesn't seem to be talking with me." The perceived lack of direct contact, as doctors spend more time inputting into the computer, is perfectly illustrated by your picture on page 10 showing the doctor and the patient both intently watching the screen of the computer rather than talking with each other. I am in favor of all the benefits of electronic charting, but this technology often

is perceived as yet another technological barrier by patients who are desperate for quality "face time" with their doctors.

Second, in my role of an independent medical examiner, I am always struck by the difficulty reading the voluminous output from systems that use electronic charting. The main difficulty from my standpoint is that very little effort seems to have been expended on good graphic display concerns, especially on printed copies of the notes. Fonts are all the same size. Extraneous bureaucratic or system data is given the same visual weight or placement as critical patient data. There is not enough visual spacing. Critical sections of data are not well differentiated. Dates of visits are often very hard to find and it seems that everything else is date- and time-stamped. Sorting all of this out visually is exhausting. Physicians in a particular system eventually get used to their own system, but physicians outside of a particular system are often baffled by

the notes, because it is not intuitively clear where to look and how to sort the wheat from the chaff. I believe that graphic experts are needed to clean up this avalanche of data so that it can be digested easily by a non-engineer viewer. So often computer technology is designed for very technical reasons and the average end user or the patient's experience of this technology is forgotten.

I just thought I would point out two aspects of Health Information Technology that is frustrating and hopefully can be improved so that it is embraced by all.

*Scott Jones, M.D. '82
Portland, Oregon*

The editor replies: Dr. Jones's observations are well taken. In the case of Dr. Carmen Guerra, however, we selected the photograph to emphasize the computer screen that showed the electronic health record, which was the focus of the article.

By Nicole Gaddis

PROFESSING

Dr. Paul Lanken believes in the usefulness of small groups for teaching doctoring and humanism. Here he leads a session with a standardized patient, meant to help students learn to break bad news. Dr. Natasha Mirza, far right, is a preceptor for the course.

Several times during my interview with Paul Lanken, M.D., G.M.E. '77, he turns to face the portrait that hangs at the end of the eighth-floor conference room; this often happens when I ask him about the human side of medicine. Lanken turns his chair, takes a moment to examine the face on the wall, and then returns to face me, formulating his answer. Many respected doctors have stood on the shoulders of giants, so it's very appropriate that Lanken turns again to someone who was a mentor during his fellowship at Penn, the late Robert L. Mayock, M.D. '42, G.M.E. '46, when he considers his own role in shaping future Penn physicians.

"Dr. Mayock was the consummate pulmonary practitioner: he was very capable, but also a very fine person. I think he represents the tradition of the physician with the wonderful bedside manner and the art of medicine," says Lanken. "There are many of those kinds of physicians at

Penn, and I feel that it is good for people to have those examples to look up to. You don't forget the people who uphold such high standards."

Yet, while it's clear that Lanken has drawn inspiration from Mayock and other Penn luminaries, his success as the driving force of humanism in the School of Medicine's curriculum also comes from within. And Lanken's efforts have been recognized. Two years ago, he was named Penn's first associate dean for professionalism and humanism.

In recent years, academic medical centers have been increasingly concerned about the twin themes of professionalism and humanism. In 2003, for example, the Association of American Medical Colleges published a report by Thomas S. Inui, Sc.M., M.D., called "A Flag in the Wind: Educating for Professionalism in Medicine." Inui argues that "students become cynical about the profession of

medicine – indeed, may see cynicism as intrinsic to medicine – because they see us 'say one thing and do another.'" He also raises concerns about medicine's preoccupation with finances and economics. In recent decades, he writes, "Core functions of the academic medical center became 'enterprises' . . . Teaching of medical students, because this activity was not remunerative, was referred to as 'an unfunded mandate.'" That, of course, is an extreme position, but Lanken and like-minded faculty members are determined to help medical professionals reclaim their role as healers and to transmit the values that students need to fulfill that role.

In Lanken's own case, the roots of his interest in the art of medicine go back well before he had even considered a medical career. Originally a chemistry and physics major in college, he wrestled with the question of how best to put his talents to use. "I liked the idea of making contact with others by practicing medicine,



and I realized that medicine offered, let's say, a variety of careers. I was interested in research; I was interested in public health; I was interested in teaching; and one could also work in administration."

During his fourth year at Harvard Medical School, Lanken performed medical missionary work in Haiti, which fed his interest in public health and gave him experience in identifying the needs of a community. "Suddenly you realized that what they needed wasn't simply a good diet, proper nutrition," he recalls. There was no clean water or sanitation. They needed education and basic skills training; they needed a public health system.

"I had thought, for a time, that it might have been my calling to be out in the field," he continues. But he noticed that everybody at the mission hospital was sending their children back to the states for their education. Being in the field, he decided, "simply wasn't practical."

After serving in Vietnam – he was among the last group of physicians to be drafted – Lanken came to Penn in 1975 as a fellow in the pulmonary medicine program. He originally considered going into practice in the Pacific Northwest or Maine, but he felt drawn to his colleagues at HUP and the research activities going on around the Intensive Care Unit. And he felt particular satisfaction in being able to teach the interns and residents, something that could not be so easily done in a private practice. He decided to stay at Penn. Today, he is professor of medicine and medical ethics and senior fellow at the Center for Bioethics.

You know, most people don't think of how difficult the first year of medical school can be," says Lanken. "The students are asking themselves: 'Am I *sure* I want to be in this med school business? I'm not seeing patients at all.' They're sitting in

the lecture halls and labs for seven, eight hours a day – that is not why they are in medical school. I think helping build relationships with patients and families can help students through that first year and reconnect them with their love of medicine.

"You form strong relationships when you're under stress and, frankly, yes, medical school is stressful!" Lanken continues. "So, we have an opportunity to have those kinds of bonds form." Such bonds, he hopes, "have added dimensions to the students' education, as well as reinforced their own abilities and added to their sense of humanism."

His comments suggest the important influence of mentors. For Lanken, there was Mayock, the first chief of the Pulmonary Disease Section at the University of Pennsylvania, who served in that position for nearly two decades. He trained more than 180 pulmonary physicians during his career and established one of the first two-year fellowship training

programs in pulmonary medicine, which became a model for other academic medical centers.

Lanken also admires Alfred Fishman, M.D., now senior associate dean for program development at the medical school, for his impressive research, critical thinking, and rigorous application of high standards. “I’m particularly interested in acute respiratory distress syndrome, which had just been discovered around 1967 and was related to the Vietnam War,” Lanken explains. “Drs. Fishman and [G. G.] Pietra were doing very basic, very exciting research on this condition when I came to Penn, and Dr. Fishman has continued to influence the standards in my research and my writing.”

Lanken hopes to see similar relationships develop for Penn’s medical students. “Humanism in medicine has quite a bit to do with the patient, but it’s also about the strength of the relationships that the physician has with his colleagues, his students, his friends and family,” he says. “I want our students to learn that it’s about *being human*: trying to balance your work life; having feelings; going through cycles of your life with other people. Being able to create a support network, and being able to draw strength and understanding from those relationships, is vitally important to how the student can then relate to the patient.”

Lanken teaches courses in medical ethics and in “doctoring” and was instrumental in creating the Longitudinal Experience to Appreciate Patient Perspectives (LEAPP) program two years ago. The course in medical ethics has its roots in some “borrowed” time out of the Advanced Cardiac Life Support (ACLS) course that was required for third-year students. As he noted in “Teaching ‘What Can’t Be Taught,’” an article in *Almanac*, the publication for the University’s faculty, that course “was practical, interactive, timely, and built

upon their prior education and experience” (September 13, 2005).

“I asked the course director, ‘Shouldn’t our students know something about when not to resuscitate, too?’ He agreed and gave me one morning for teaching ACLS ethics. My goal was for students to consider learning medical ethics as relevant and interesting as the ACLS algorithms and simulations. To fuel discussions and ethical analyses, the small groups of students and faculty facilitators used authentic (but disguised) cases from my personal experience. We also encouraged students to bring cases from their own clinical experiences to their groups. The initial morning session has evolved into a required one-week course, Bioethics and Professionalism, that seniors rate as one of the best courses in their four years of medical school.”

The session was particularly relevant because of a precedent setting court case in New Jersey. In April 1975, Karen Ann Quinlan suffered irreversible brain damage after experiencing an extended period of respiratory failure and subsequently was placed on a respirator in hospital. Her parents wanted to have her taken off the respirator but hospital officials refused. In 1976, the Quinlans took their case to the New Jersey Supreme Court, which decided in favor of her parents – and Quinlan became the first major figure in the right-to-die debate.

The hospice and palliative care movement was also gaining ground after the Quinlan verdict, and the physicians at HUP were facing more challenging ethical decisions. “Making these kinds of decisions wasn’t a purely intellectual process,” notes Lanken, “and the Hospital decided that the physicians needed some guidance in making those decisions, especially after the Quinlan verdict, and I was one of the founding members of the Hospital’s ethics committee.” Naturally, the committee first had to face the question:



According to Lanken, the essence of humanism is putting the else simply falls into place: decorum, respect, professionalism.”

can ethics be taught? There were many who argued, “No,” and many who responded, “We’re already ethical here.” But, Lanken realized, HUP was an academic institution – a place centered on learning. It educated house staff and students. And it was this approach that finally won the senior staff over.

Both the ACLS sessions and HUP’s ethics committee helped lay the groundwork for a full-fledged, one-week inten-



patient's welfare first. "If you keep that in mind, everything

sive ethics course, which was piloted in the early 1990s. The course was originally an elective for first-year students, and although the real-life cases were interesting, the first-year students didn't have the clinical experience, insights, or knowledge to make the experience more than just an intellectual exercise.

Lanken then learned of a successful two-week intensive course that was being taught at the University of California at

San Francisco; he realized that such a course, taught to a vastly more experienced audience, would be much more useful. "I asked for two weeks from the curriculum committee. They voted to give me one," he says with a chuckle. "But the course has been offered for the past ten years and is required of all of the students for graduation – it's not marginalized or peripheral or elective, and there's no competition from other courses." Fourth-year students are taught in small groups and bring in their own cases to this 9-to-5 immersion in bioethics.

Perhaps more challenging than convincing students and physicians about the need to teach ethics, however, is defining "humanism" – especially when one is charged with developing the "Professionalism and Humanism" model of Curriculum 2000, the medical school's ambitious overhaul of its curriculum. William N. Kelly, M.D., then the dean, wanted "humanism" emphasized. As Lanken recalls it, "After I started as director for this module, I invited a group of esteemed colleagues from the School of Medicine and the University, including sociology professors and the chaplain – people that I knew were interested in the humanistic aspects of medicine – and we convened a meeting. I said, 'One of our tasks is to try to define this thing,' and we spent about *three months* having many, many discussions about it, but we could never pin it down."

Lanken came to believe that it wasn't necessary to define humanism in concrete terms; the essence of humanism is putting the patient's welfare first. "If you keep that in mind, everything else simply falls into place: decorum, respect, professionalism."

The small-group approach was applied to the new doctoring course, which is the keystone of the Professionalism and Humanism Module. "These groups are particularly useful in discussing the students' personal, very sensitive experiences, such as patients who die," says Lanken.

"The student's team that was working on the patient may not even discuss it – so it becomes vitally important to provide an arena, albeit a smaller and more personal one, to share this kind of experience and also gain perspective from those who have faced this issue before. We're able to improve the quality of the experience for our students by providing these groups where they can receive this kind of support from their peers and faculty preceptors."

Yet, like Lanken's first stab at a bioethics course, the doctoring program was presented to first-year students with no clinical experience. "It was becoming clear to me that talking about the doctor-patient relationship to students who have never seen a patient lacked a certain punch," he recalls. Yet, by the time the students reach their clerkships later in the curriculum, they are simply too busy to look back.

What was missing, as Gail Morrison, M.D. '71, G.M.E. '77, vice dean for education, astutely pointed out, was the patient-centered experience. Supported by an extremely generous anonymous donation, the school introduced the Doctoring Longitudinal Patient-Centered Experience (as LEAPP was originally called) into its curriculum. "You may do a three-week outpatient rotation in pediatrics and see a patient twice," Lanken notes. "You don't see that patient over six months or a year or two years."

"Today, ninety-five percent of patients are seen outside of an acute-care setting," explains Morrison, "yet most medical schools, up until ten to twelve years ago, trained students in only the hospital setting." The shift came when insurance companies began to benchmark for a patient's length of stay and paid claims according to clusters of conditions (diagnostic related groups, or DRGs); predictably, the length of hospital stays shortened, and most patients who were admitted to the hospital were very ill and often had multiple complications. Says



As part of the LEAPP program, students Scott Caesar (left), Lauren Marlowe, and Stephan Kadauke meet with Ida Morris of West Philadelphia.

Morrison, “There was just an incredible number of conditions that our students were no longer being exposed to.”

LEAPP sounds quite simple, but it is amazingly complex in its execution: students are paired with chronically ill patients over the first three years of their medical school careers. They visit that patient in her home, when she visits her doctor, and when she is admitted to the hospital; and the students share their experiences with the groups in the doctoring course.

“This program is truly unique from anything else that has come before, or since, because it is required of *all* medical school students from day one,” says Morrison. “The patients who are part of the program must have a chronic illness, and the entire experience is fully integrated into the medical school curriculum. There simply isn’t anything else like it.”

“Now,” says Lanken, “first-year students can get right into the trenches, hit the ground running, and see professionalism and humanism in action.”

Second-year students now integrate their experiences in the LEAPP program with their clerkships and encounter a new set of challenges that will shape their future as doctors. A clerkship is by its nature disease-centered, and the stu-

dents have noted that they had to keep from falling into the trap of thinking of their LEAPP patients – with whom they had developed relationships as *individuals* – only in terms of their disease or condition.

“**A**nd the relationship that we build with our patient is also unique,” says one of the students, Alison Downes. She has just concluded a brief presentation on her patient – who has diabetes and is struggling with glucose control – and wonders, “Is he a really good LEAPP patient?”

“He’s a wonderfully warm and friendly person,” she explains, “and I feel more like a friend than a medical student who is supposed to learn from him. He has some challenges, such as his relationship with his children, but he doesn’t face many of the hardships that some people living in West Philadelphia could normally encounter. He doesn’t *live* like he’s handicapped.”

But the discussion goes on to reveal an underlying problem with the patient’s diet – and his tendency to splurge on the occasional large plateful of spaghetti. “He tests regularly and keeps a meticulous diary,” Downes says, “but we’re still working on showing him how important diet is in maintaining glucose control.” She noticed

that it was largely a problem of perception: her patient would feel fine even if his glucose was far too high, but he can easily feel the effects of low blood sugar. (Downes was extremely concerned about an incident a couple of years ago when he fell off a high ladder because of a drop in his glucose level.) Finally, Downes observes, “Well, English isn’t his native language, and he dropped out of school when he was quite young. There’s probably a health literacy issue here.” The discussion with her fellow students is having the desired effect: she is taking a second look at her observations and receiving support in her effort to help her patient modify his eating habits.

“It’s been difficult to ask my patient some of these very personal questions,” says Downes. Still, she plans to go into primary care medicine – and believes that this kind of encounter is a challenge that will serve her well.

Andrew Wilmot, one of the first Penn medical students to take part in the program, was paired with Ms. Dollie Williams of West Philadelphia. “I don’t think a doctor can fully appreciate the importance of what he does without getting the opportunity to follow up on his patients and see the impact of his care,” he says. “It has been a really profound experience forming this bond with Ms. Williams, and I hope I get to know my future patients the same way I’ve gotten to know her.” Williams, who undergoes dialysis at Penn Presbyterian Medical Center, notes that Wilmot and Autumn Michelle Martin, the second student, “were wonderfully down to earth, respectful, and let me ‘take charge.’ . . . These students are eager to learn from my life, to get involved. They’ll make better doctors, hands down.”

Another student in the LEAPP program is Christopher Guerry, who has been paired with a patient from Shiloh, N.J., Deb Becker. “Medical students can learn from me,” says Becker, who has long battled

cystic fibrosis and must remain on oxygen around the clock. “When it comes to medical treatment, . . . I want to know why someone’s doing something. I want the young doctors to learn to respect the patient as a thinking person and make time for them.”

Guerry spent two hours with Becker on the first visit. “Mrs. Becker is wonderfully open, and there is so much we can learn from her personality and strength,” he says.

LEAPP remains ready to incorporate new ideas. Inspired by a program started by Premera Blue Cross of Washington State, LEAPP now has a “Brown Bag” exercise. Patients are asked to put all their prescribed medications in a brown bag LEAPP provides, along with over-the-counter medications, vitamins, dietary supplements, and a list of injectable medications they take. When they meet with their students, they compare what’s in the bag with the patients’ list of current recommended medications and supplements. In addition, the students try to make sure the patients are taking the prescribed medications properly. “Anecdotally, I’ve heard of the students finding out things about patient’s medication use that was important for the patient’s physician to know,” notes Lanken.

While it will be many years before the benefits of LEAPP and Curriculum 2000 are effectively measured, Lanken’s efforts are beginning to be recognized more widely. In September 2004, he was appointed associate dean for professionalism and humanism at the School of Medicine, which continues his oversight of all of the courses and classes related to the Professionalism and Humanism Module. He has also received a STEP (Strategies for Teaching and Evaluating Professionalism) grant from the American Medical Association. With the

help of the grant, Penn tested a pilot program to improve students’ communications skills in breaking bad news. In this case, “standardized patients” – professionals who are trained to act as actual patients would – were employed. Audiey Kao, M.D. ’90, G.M.E. ’93, vice president of the AMA’s ethics group, visited Penn for an update on the STEP project. “The humanism and professionalism coursework is a clear reflection of the School of Medicine’s commitment to improvement,”

The LEAPP program “is truly unique from anything else that has come before, or since, because it is required of all medical school students from day one,” says Gail Morrison, M.D., vice dean for education. “The entire experience is fully integrated into the medical school curriculum.”

says Kao, noting that Penn “is still on the cutting edge of how to train new generations of doctors.”

Being appointed associate dean, says Lanken, is “really a sort of dream come true. I don’t know of any medical schools that have such a position – it would be great to be setting a precedent!” Most of all, Lanken is grateful that this commitment by Penn means that his work will continue long after he’s gone.

Lanken is also a recent recipient (2005) of the University’s Lindback Award for

Distinguished Teaching. (He’s also received the Special Dean’s Award for Teaching.) The Lindback Award was the context for his article in *Almanac*, which reported that Lanken’s bioethics course is one of the highest-rated in the medical school curriculum and that he consistently receives among the highest teaching scores both as a lecturer and in group sessions. He is described as “an engaged physician” and “a dedicated mentor.” One student wrote: “His thought-provoking approach to medical ethics, implementation of progressive humanistic training, and his unparalleled dedication to students make him a true role model.” Another added: “Years from now I will smile when I tell people that I trained under Dr. Lanken at Penn, one of the giants of his day.”

So Lanken appears to have come full circle.

“Paul Lanken is an individual who truly understands the importance of the doctor-patient relationship and appreciates the moral standards and ethical dilemmas that doctors will face in the twenty-first century,” says Gail Morrison. “He’s taken a stand and developed the content, skills, attitude, and required competency for these relatively new issues of professionalism and humanism for the curriculum.” As she sums up: “He is a role model and leader for our students.”

Lanken’s final words of our meeting still echo the influence of Mayock and Fishman and the support of many colleagues through the years: “You want to get it across to the students that it’s important to have someone who cares about the patient, to have the patient *know* that you care, as a human being,” he explains. “But you can’t separate the competence, the expertise from being a professional.

“I look at it as an investment that’s not only paying off now, for me and for these students, but that will be paying dividends for a long, long time at PENN Medicine.” ■

PONDERING PROFESSIONALISM

As Medical Alumni Hall began to fill, it became clear that the event on this March afternoon was drawing a good share of department chairs and senior faculty members, in addition to house staff and medical students. The title of the symposium seemed both abstract and practical – “Professionalism: What Is It? Can It Be Taught? What Can It Do for Us?”

Alan G. Wasserstein, M.D., associate professor of medicine and vice dean for faculty affairs, set the context for the symposium. He acknowledged the work of Gail Morrison, M.D., '71, G.M.E. '77, and Paul Lanken, M.D., G.M.E. '77, in developing a curriculum in professionalism and humanism that extends throughout the four years of medical school.

“Professionalism is the current byword of a movement, now some decades old, to instill humanism in medicine,” said Wasserstein. “Not only is professionalism supposed to restore humanism to medical practice that has become exclusively technical, it is also supposed to restore to physicians some of the authority that has passed to government and corporations. And all this in an environment that is somewhat adverse to professionalism, where (as the recent literature tells us) house staff and faculty have impossibly busy schedules and are increasingly susceptible to burnout and depression, and where medicine increasingly resembles a business. Our medical students hear high-sounding phrases about the primacy of patient welfare, altruism, and integrity, and then enter a hurly-burly of clinical activity that sometimes includes unprofessional behaviors from so-called role models. It is not surprising that some become cynical.”

He expressed what could be called cautious optimism: “Of course, if absence

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“Hi! My name is Kevin, and I’ll be your doctor today”

of humanism is the cause of this malaise, then professionalism may well be the right treatment. But you wonder where and how, in the current environment, it can really flourish.”

The guest speakers have all written and spoken widely on the day’s topic. First to speak was Jack Coulehan, M.D., M.P.H., a professor of preventive medicine at the State University of New York at Stony Brook, where he also serves as director of the Institute for Medicine in Contemporary Society. In the Stony Brook medical school, he directs its required four-year curriculum in ethics and social issues in medicine.

Coulehan began by noting that incoming medical students at Stony Brook enter the school determined to be activists and “complete physicians.” Four years later, however, there is “a very complex kind of change,” brought about primarily because of the disparity students often witness between a medical school’s explicit curriculum and “the informal curriculum.” Coulehan cited three possible outcomes: 1. “Frankly, they become very cyn-

ical” and tend to see themselves as “technicians.” 2. Some successfully navigate the dangers, often by finding the right role models. 3. The middle group of students – the likely majority – exhibit “non-reflective professionalism.” That means they hold certain views that are mutually contradictory, and their behavior may sometimes be inconsistent with their beliefs. As Coulehan put it, they may tell themselves “the patient comes first,” but they remain detached from the patient, acting out of self-interest and a sense of entitlement.

Despite this daunting picture, Coulehan had some concrete proposals for fostering professionalism:

Medical schools need to change their clinical departments so that they include more role models “who demonstrate the qualities we want to inculcate.” Second, although medical students are often “afraid” to experience an emotion, they must be taught that it is normal. Third, students can be taught to make use of “narrative,” not in the patients’ charts but “in our

By John Shea

minds, in our relationships.” Finally, Coulehan recommended that the schools introduce socially relevant service-oriented learning.

When Wasserstein asked how to persuade faculty members to become role models, Coulehan responded: “That’s where the deans come in!” Medical schools need to “send a message” from the top. At Stony Brook, said Coulehan, those who serve as mentors and role models receive letters, “special awards,” even “certain supplements to their salaries.”

A member of the audience suggested that the most important thing was to create “more emotionally intelligent” physicians. “I agree with you,” said Coulehan, “but the term professionalism sells these days.”

At this point, another panelist, Richard Cruess, M.D., said that he “objected strongly” to the idea that professionalism is only about emotions. Cruess, a professor of orthopaedic surgery at McGill University and member of its Centre for Medical Education, stated that professionalism includes many other elements, such as competence, accountability, self-regulation, altruism, and so on.

During their presentation, Richard Cruess and Sylvia Cruess, M.D., professor of medicine at McGill University and member of its Centre for Medical Education, spoke of the dual roles of the physician: healer and professional. While conceding that role models can be effective, they believe the educational system requires more. As one of their slides put it, “What in the past has been IMPLICIT must now be made EXPLICIT.” The method they recommend is “situated learning,” from theory to experience. This involves a cognitive base; self-reflection; role modeling; and a suitable environment that does not subvert professional values.

At McGill, said Sylvia Cruess, the first lecture the medical students hear promotes opportunities for self-reflection. The Cruesses also emphasized that when a society grants physicians “the privilege of self-regulation,” it demands certain things in return. In fact, McGill offers a fourth-year seminar called “The Social Contract and You.” Another recent addition at McGill is the Osler Fellows, faculty members

who teach in the “Physician Apprenticeship” course. They are selected from a list generated by the students themselves.

A person in the audience asked whether the current generation of physicians is really different, as the Association of American Medical Colleges has suggested – more concerned with “income and lifestyle.”

In reply, Richard Cruess said that members of the younger generation “don’t like the word *altruism*,” which they perceive as too broad, involving 24-hour service that is neither healthy for the practitioners nor compatible with their lifestyles. “We say that altruism is non-negotiable,” Cruess asserted. If altruism is not a given, patients “can’t trust you.” As Sylvia Cruess pointed out, that’s why all would-be medical professionals need an explicit description of their part of the contract.

Another questioner cited an ethnographic study of residency programs that found that residents can heal, but they don’t know the social contract. Because they were never *taught* it, Richard Cruess replied forcefully. “We’ve got monstrous failures in meeting our societal obligations,” he said. The newcomers don’t understand that “they *are* their brothers’ keepers” when they join a profession.

Sylvia and Richard Cruess obviously believe that professionalism can be taught. Coulehan concurs. As he put it, “We are forming the characters of these students,” despite what he jokingly called their “ridiculous idea” that their characters are already formed by the time they reach medical school.

The third panelist was Richard Cooper, M.D., who returned to the School of Medicine last year from the Medical College of Wisconsin. His talk was called “Medical Education in Flexner’s Second Century.” ■



“Ah, Mr. Bremley. Nice to put a face on a disease.”

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Peter Quinn goes face to face with the joint replacement prosthesis he helped develop.

TAKING ON

It commonly starts with a telltale clicking of the jaw, nails-on-chalkboard teeth grinding, and unmistakable facial pain. For patients with a temporomandibular joint disorder (TMD), it's excruciating.

Ending the pain is the passion of Peter D. Quinn, M.D., D.M.D., chair of Oral and Maxillofacial Surgery at the Hospital of the University of Pennsylvania. Every day, patients from around the world seek out the expertise of Quinn and his colleagues in the renowned program for TMJ and facial pain. An international authority on TMD, Quinn is the author of *Color Atlas of Temporomandibular Joint Surgery* (Mosby, 1998). With other "physicians of the mouth," he treats one of the largest populations of patients with TMD in the country, seeing them at HUP and at Penn's School of Dental Medicine.

And the patients keep coming. TMD affects nearly one-fifth of the U.S. population. The good news for many of them is that conservative approaches such as physical therapy and mouth guards are highly successful. For six percent of patients with TMD, however, the only recourse is surgery.

Penn's TMJ and facial pain program – which includes interdisciplinary specialists in oral medicine, oral and maxillofacial surgery, neurology, neurosurgery, rheumatology, otorhinolaryngology, rehabilitative medicine, and anesthesiology – offers the full range of surgical services for TMD. These include arthroscopy, which uses a fiberoptic probe to remove scar tissue and flush the joint; arthroplasty, a kind of open joint surgery, usually to reposition a locked jaw or remove a perforated disc; and total joint replacement. But for some patients with the disorder, even traditional oral surgery techniques are not enough.

"We had a waiting room full of people who needed the last option," recalls Quinn, whose program drew some 2,100 patients in 2005. "And we didn't have it." Until now, that is.

Earlier this year, the Food and Drug Administration approved the W. Lorenz Total TMJ Replacement System, a prosthesis developed by Quinn and tested over a ten-year period. The clinical trials began in 1995 at Penn, where 75 percent of the surgeries were performed, and at Southwestern University in Texas. It is the first stock prosthesis of its kind to earn the F.D.A.'s approval.

The prosthesis is precisely what patients like Emily Angus (not her real name) were waiting for. She had undergone five surgical attempts over four years to correct her TMD, including two three-month periods when her jaws were wired shut. Finally, her oral surgeon referred her to Quinn. She became one of the people he fitted with the Lorenz prosthesis.

Conceiving, Creating, and Testing

Quinn is both a D.M.D. and an M.D. and in fact also serves as chair of Oral Surgery and Pharmacology at the School of Dental Medicine. That interdisciplinary background allows him to draw from the best techniques in both dental medicine and surgery, particularly orthopaedic expertise in joint replacement. In his quest to develop a prosthesis for patients like Angus, he also needed imagination – and persistence. In 1989, he began approaching orthopaedic companies, hoping to persuade one to help create and test the prosthesis he imagined. But the initial response was not encouraging. Because there were likely to be only 1,000 TMJ replacements in the U.S. each year, the companies did not see much

By Jennifer Baldino Bonett

*With appointments in Penn's School of Medicine and School of Dental Medicine, Peter Quinn has been in an excellent position to solve one of the most **painful maxillofacial disorders.***

Photographs by Tommy Leonardi

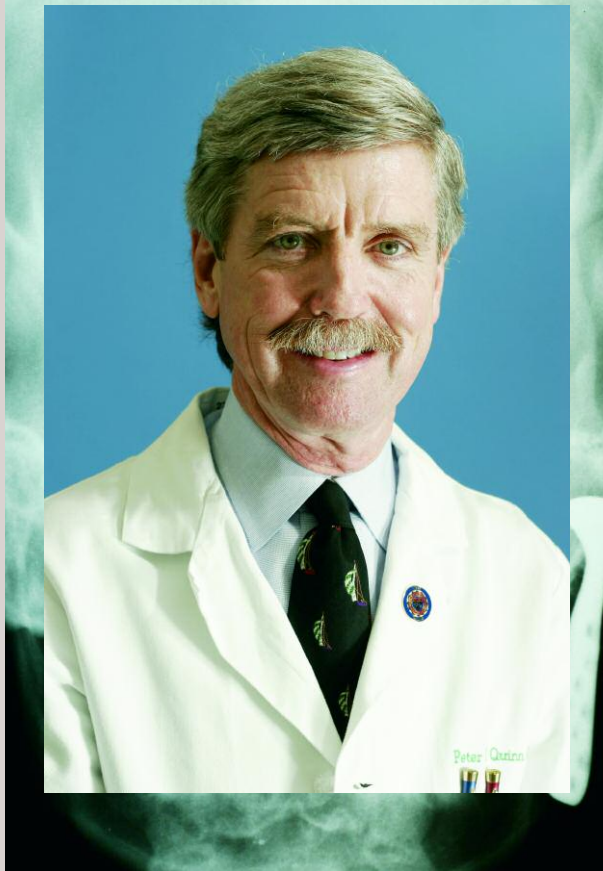
commercial potential in the project. In contrast, there are a half million hip and knee replacements every year. Then, in the early 1990s, Quinn received a positive response from Biomet, an international orthopaedic equipment company headquartered in Indiana. The company, which had acquired Walter Lorenz Surgical, Inc., a developer of craniomaxillofacial products, invited Quinn to begin working on a clinical trial.

In August 1995, Quinn placed the first Lorenz stock prosthesis in a patient. The device features a polyethylene socket, a metal condyle made from cobalt-chromium-molybdenum alloy, and titanium alloy screws. First of all, the prosthesis underwent vigorous biomaterial laboratory testing to make sure its materials did not fail, which had been a problem with earlier models. Indeed, many of Quinn's current TMJ surgeries involve removing old prostheses that had failed and replacing them with the Lorenz prosthesis. In contrast, the oldest Lorenz prosthesis, placed nearly 10 years ago, is still functioning well.

"Because of materials testing, we think this has a much longer lifespan," says Quinn.

The clinical trial also tested for mechanical flaws – and again the new prosthesis passed convincingly. Just as important, patients were very satisfied.

Quinn is the clinician-consultant on the project, and Lorenz-Biomet holds the patent. He concedes that his initial hopes for the prosthesis were modest. "I just wanted something in my hands that I could use here at Penn since we had no other safe and efficacious alternative."



Peter Quinn played a major role in expanding Oral and Maxillofacial Surgery at Penn.

Today, Quinn's clinical focus is almost exclusively TMD. The surgery is delicate. As Quinn puts it, the socket where the device has to fit "is only a millimeter or two from your brain, is very thin in the middle, and has this bump that differs from person to person. So we flattened the design to eliminate the bump, created three different sizes, and enabled the device to be screwed into the cheek bone."

One of the people who knows Quinn's work best is Martin S. Greenberg, D.D.S., professor and chair of the Department of Oral Medicine at Penn's School of Dental Medicine. Greenberg serves as co-chair with Quinn of the TMJ and facial pain program. According to Greenberg, the joint prosthesis Quinn developed "was a major advance for patient care in this the field. Previous TM joint prostheses had many setbacks and resulted in serious complications. Dr. Quinn's joint prosthesis has allowed patients with advanced, previously untreatable diseases to have good function with greatly reduced pain."

Building a Program

Quinn came directly to Penn for his D.M.D. degree after college in 1970. In 1982, he completed his M.D. training at the Medical College of Pennsylvania. He joined Penn's medical faculty as its only full-time oral and maxillofacial surgeon in 1984 and so has had a hand in developing the department into what it is today: seven full-time oral and maxillofacial surgeons and 18 oral and maxillofacial surgery residents, as well as four oral medicine residents.

Now that the W. Lorenz total TMJ replacement system had been approved, Quinn is likely to remain busy, as an instructor and trainer. He is one of only two oral and maxillofacial surgeons in the United States with expertise in implanting the Lorenz replacement. Quinn has run training sessions abroad and began training American oral and maxillofacial surgeons in March 2005. He notes that the F.D.A. mandated that only surgeons who have been trained are permitted to perform the procedure "since it is so technique-sensitive."

In his more than 20 years at Penn, Quinn has had an impact that goes well beyond the Lorenz TMJ prosthesis. Greenberg describes him as "the major force in expanding the role of Oral and Maxillofacial Surgery" both at the medical school and at Penn Dental. "When he arrived, Oral Surgery mainly consisted of intra-oral surgical procedures. The faculty of the Department of Oral and Maxillofacial Surgery, who have been trained by Dr. Quinn, now make major contributions to the fields of facial trauma, surgery of complex maxillofacial pathology, and temporomandibular joint surgery." According to Greenberg, Quinn also was responsible for greatly expanding both the size and scope of the Oral and Maxillofacial training program both for dental students and postdoctoral trainees in the Oral Surgery residency program. "This program," says Greenberg, "is now one of the most highly regarded programs in the country." ■

ALTHOUGH MISALIGNED EYES ARE OFTEN THOUGHT OF AS A CONDITION THAT AFFECTS CHILDREN, DR. NICHOLAS VOLPE OPERATES EXCLUSIVELY ON ADULTS WITH STRABISMUS

SEEING STRAIGHT

By Jon Caroulis

Photographs by Daniel Burke

Because of her eye condition, Anna Maria DiStefano wore dark sunglasses all the time. Her co-workers at the bank knew about it and said nothing, but every now and then a customer would see her with the sunglasses on and ask, “Are you trying to be a movie star or something?”

“Take a look at this!” she would reply, removing the glasses: her eyeballs were rigid, even bulging out of their sockets. “See what’s wrong with my eyes? Movie star? Get out of here! I can’t take the bright lights,” she’d tell the customer, who was typically shocked.

Three years ago, DiStefano developed thyroid trouble that swelled and stiffened her eye muscles. Doctors thought it might be cancer, and they removed her thyroid. After the surgery, she was still having trouble moving her eyes. To see to her left or right, she’d have to tilt her head, which would make her dizzy. To watch TV in bed, she’d have to lie on her

After successful surgery for strabismus, Anna Maria DiStefano no longer hides behind dark sunglasses.



side and cover one of her eyes – she had double vision, and the images were not side-by-side but one on top of the other. She also had to tilt her head while driving or cooking.

Her endocrinologist suggested she see two specialists at Penn's Scheie Eye Institute: Roberta E. Gausas, M.D., associate professor of clinical ophthalmology, who performs orbital decompression, and Nicholas J. Volpe, M.D., professor of ophthalmology, who performs surgery to correct the crossed eyes and double vision that are among the primary symptoms of strabismus.

First Gausas and then Volpe operated on DiStefano in the spring of 2004, and within days her vision improved.

"I feel so much better now," said DiStefano. "It's changed my life."

About five percent of all children are born with strabismus, in which the eyes are misaligned. According to Volpe, the cause is not known, but surgery can correct the problem.

In adults, strabismus can be caused by problems that persist from childhood, brain injury, orbital disease, or trauma; in the case of thyroid disease, the eye muscles can become stiff and enlarged. Volpe also notes that a child born with strabismus who had corrective surgery might develop a recurrence of the condition. About 50 percent of his patients have this type of problem. Volpe operates exclusively on adults (from age 16 to people in their 80s) and performs about 15 surgeries of this type per month.

The corrective surgery to realign the eyes has functional benefits that can eliminate double vision and restore normal binocular and three-dimensional vision. For some patients, it is a constant strain to use the eyes and maintain good alignment, and surgery can be very helpful in relieving these symptoms. For others,



CORRECTIVE SURGERY FOR STRABISMUS HAS BOTH FUNCTIONAL AND COSMETIC BENEFITS, BUT AS DR. NICHOLAS VOLPE POINTS OUT, THERE ARE PSYCHO-SOCIAL CONCERNS AS WELL. "WITH PEOPLE, EYE CONTACT IS SO VITAL," HE SAYS, ADDING THAT SEVERAL STUDIES HAVE REPORTED THAT PEOPLE WITH STRABISMUS "DON'T DO AS WELL LOOKING FOR JOBS."



Dr. Nicholas Volpe makes use of the tools of his profession.



there are “cosmetic” benefits, but as Volpe points out, there are psycho-social concerns that go far beyond simple cosmetic issues. Cosmetic surgery changes a normal, sometimes aged structure; functional surgery alters a disease state. “With peo-



ple, eye contact is so vital,” he says, adding that several studies have reported that people with obvious strabismus, for example, “don’t do as well looking for jobs. It’s very disturbing and makes eye contact and conversation difficult for some people.” In his view, correcting such a problem with strabismus surgery, in addition to the visual benefits, can be vital to an individual’s self-confidence and successful interactions with others – and that goes far beyond “cosmetic” surgery.

Strabismus can also occur in patients with thyroid disease, an auto-immune disease in which anti-bodies react with the thyroid and affect it, causing it to be inflamed and/or leak. The result is a hyperthyroid state as well as an inflammation of the tissues of eye sockets and eye muscles. What happens is that the eyeball can be pulled in a different direction; or, as in DiStefano’s case, the stiffened eye muscles severely restrict the eye’s normal movements.

Volpe’s surgery “loosens” the muscles and puts them into a position in which the patient can regain movement. Using adjustable sutures, Volpe creates a “temporary pulley” system and repositions the eye. On the following day, he examines where the eye has been relocated. If it’s in the right position, he’ll tie the sutures (which are subsequently resorbed) or, if necessary, will reposition the sutures based on how the eye is positioned and how the patient describes her vision.

There are non-surgical therapies for treating strabismus, and one is using botulinum toxin. Although botulinum toxin is also used for cosmetic reasons, its muscle-weakening qualities can alleviate some

forms of eye misalignment and double vision, in addition to other neurological movement disorders. Volpe has used it when a patient has suffered a brain injury and developed a nerve palsy, which prevents her from moving the eye in an outward position. As a result, the eye crosses in. Botulinum toxin is also used for patients who have excessive twitching of eye or facial muscles.

Volpe came to Penn after earning his M.D. degree from SUNY Health Science Center at Brooklyn and completing his training at Massachusetts Eye & Ear Infirmary, Harvard Medical School. He has been recognized as a “Top Doc” by *Philadelphia Magazine* and has also been listed in *Best Doctors in America*. With two other Penn faculty members, Grant T. Liu, M.D., and Steven Galetta, M.D., he is an author of *Neuro-Ophthalmology: Diagnosis and Management* (2001), which was described by a reviewer in *The New England Journal of Medicine* as “uniformly high in quality, authoritative, cohesive, down to earth, and easy to read.”

Volpe remembers always wanting to be a doctor. He chose ophthalmology, he says, “because I wasn’t good at dealing with death and dying, and I liked the fact that you’re providing a fair amount of medical care and also have the option to incorporate surgical care into practice.” His practice goes beyond dealing with strabismus.

Yet, as he goes on to explain, “Those patients who have neuro-ophthalmic vision problems are among the most difficult to take care of, and that’s how I came into the field – I wanted that challenge.”

One of those patients with a challenging condition, Ann Maria DiStefano, still visits Volpe for routine follow-ups, and Volpe has told her she’s doing fine. Now, she says, she can enjoy doing all the things she couldn’t do with her strabismus, “like redecorating the house!” ♥

Psychiatrist *as Writer,*



Author and subjects: Arnold Ludwig is flanked here by Napoleon and Julius Caesar, two of the great leaders he has studied.

Writer as Psychiatrist

By Marie Gehret and John Shea
Photographs of Dr. Ludwig by Karen Philippi

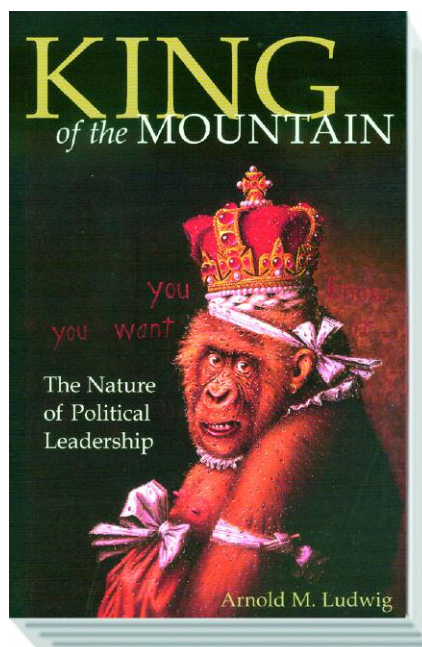
Arnold M. Ludwig, M.D., a Penn alumnus, has studied some of the most interesting questions in psychiatry and beyond while sharing his insights with a wide audience.

It may be the lot of many an academic psychiatrist to publish little that is noticed outside his or her narrow field, to be read only by a handful of readers. That certainly has not been the case with Arnold M. Ludwig, M.D. '58, emeritus professor and former chair of psychiatry at the University of Kentucky. Now a resident of Rhode Island and newly appointed as adjunct professor of psychiatry and human behavior at Brown University, Ludwig can point to a plump *curriculum vitae*. It includes 10 nonfiction books and a host of articles, as well as the occasional mention in newspapers like *The New York Times* and *The Philadelphia Inquirer* and an appearance on C-SPAN's *Booknotes* with Brian Lamb. In part, this attention comes because of the subject matter of Arnold's writings: the nature of addiction and craving; the possible connection between creativity and madness; the ways individuals shape their identities; and the traits of political leadership.

Arnold also seems to have a way with words that allows him to reach a broader audience than many of his fellow specialists, while doing justice to complex ideas. Reviewing Arnold's *How Do We Know Who We Are? A Biography of the Self* (Oxford University Press, 1997) in *Biography Magazine*, William Todd Schultz wrote: "Ludwig's prose is delightfully informal given the density of the subject at hand. He writes far better than the typically

tone-deaf psychologist. . . . The prose has personality."

When Ludwig's *Understanding the Alcoholic's Mind: The Nature of Craving and How to Control It* appeared in 1989, it drew favorable notice from specialists and from self-avowed alcoholics. The publisher, Oxford University Press, cited a quotation from G. Alan Marlatt, Ph.D., a professor of psychology at the University of Washington and director of its Addictive Behaviors Research Center: "This book will . . . save lives." Diane J., reviewing the book on LifeRing (www.unhooked.com) called it "a fascinating and elegant little book on craving and relapse, the cognitive distortions that accompany both, and methods used by successfully sober alcoholics to 'avoid or resist temptation.'"



A Biological Impulse to Rule?

Ludwig's most recent nonfiction publication is *King of the Mountain: The Nature of Political Leadership* (University Press of Kentucky, 2002). As Ludwig told Brian Lamb, the project took him in a direction he could not have anticipated: into the world of monkeys, apes, and chimpanzees. In his book Ludwig attempts to answer this fundamental question: Is there an innate biological impulse that governs the hunger for power in world leaders, much as it does for other primates?

In books such as *Presidential Power* (1960) and *Presidential Character* (1972), political scientists Richard E. Neustadt and James David Barber argued that personality – particularly charisma and a talent for persuasion – was a definitive factor in determining the success of American presidents. Similar studies gained momentum in the early 1970s, when the U.S. government established the Center for the Analysis of Personality and Political Behavior at the C.I.A. The center's staff advised presidents and officials of the State Department on the psychological idiosyncrasies of foreign leaders. Although the center is no longer in operation, today there are an estimated 900 programs in leadership studies at American universities.

Ludwig, however, has taken the psychological scrutiny of leaders a step farther. He began to develop the concept for *King of the Mountain* while conducting

research for *The Price of Greatness: Resolving the Creativity and Madness Controversy* (Guilford Press, 1995). The earlier work examined a sample of more than 1,000 extraordinarily creative men and women from 18 different professions.

“In almost all other professions, there’s something tangible you can go on,” Ludwig said on C-SPAN. “A scientist does research. He publishes his work. An artist performs. A business man makes money.” But what is a politician’s product and how is his or her greatness measured?

Ludwig’s exploration took 18 years, during which he studied the lives of more than 1,900 world leaders who represented 199 independent countries between January 1, 1900, and December 31, 2000. Ludwig pored over biographies, treatises, and political accounts of these rulers.

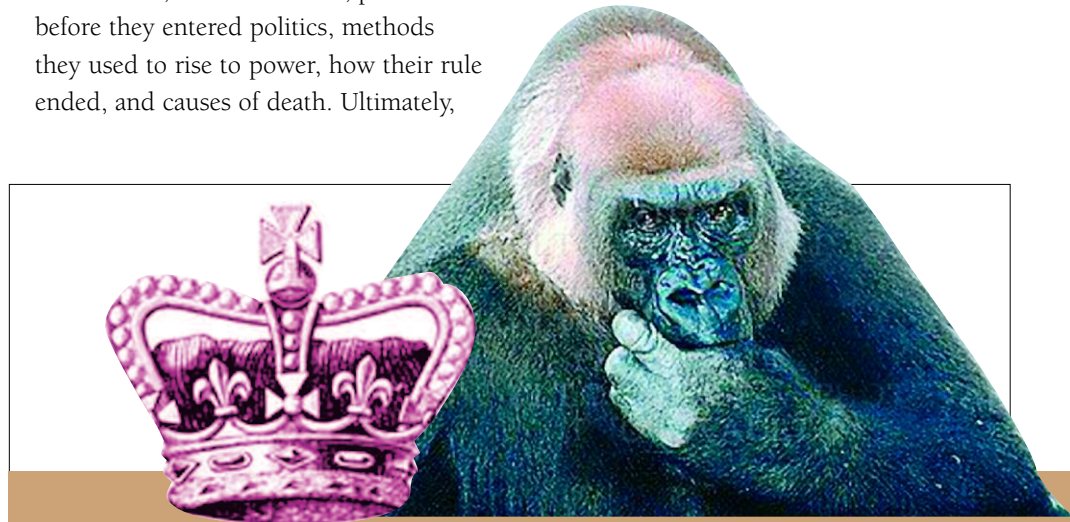
Ludwig identified 11 common features of successful leaders, which include: loss or gain of territory, how long a leader stayed in power, whether he won or lost wars, whether he engaged in social engineering, whether he improved or worsened the economy of the country, whether he created original ideology, and whether he served as a moral exemplar to his subjects. These features formed the basis of Ludwig’s “Political Greatness Scale,” which he used to score leaders’ relative “greatness” on a scale of 1 to 37. According to Ludwig, the scale filled a void where no cross-cultural measure of political success previously existed for measuring a leader’s *impact* on the world, not just his personal virtue. On this scale, war-mongering turns out to be critical to one’s long-term historical standing.

That criteria can make for some unexpected juxtapositions. For example, Yassir Arafat, the Palestinian leader who died recently, scored 17 points, placing him on a par with Dwight D. Eisenhower. The scale’s highest performers, moreover, are a mixed bag of dictators and political tyrants, including Hitler (25), Mussolini (26),

and Stalin (29), as well as a lone American president, Franklin D. Roosevelt (30).

Ludwig also selected a subgroup of 377 leaders, including former Ugandan President Idi Amin, British prime ministers Winston Churchill and Tony Blair, and former President Ronald Reagan, about whom substantial biographical information was available. He examined their early backgrounds, religious upbringing, education levels, marital histories, professions before they entered politics, methods they used to rise to power, how their rule ended, and causes of death. Ultimately,

he classified the rulers into six categories to “show how certain kinds of people are drawn to certain kinds of rule and how these certain kinds of rule reciprocally shape their characters.” The categories are: supreme monarchs; tyrants and despots; authoritarians; visionaries; transitional democrats or rulers of emerging democracies; and, finally, democrats or leaders of established democracies.



WHY RULERS RULE

By comparing the behaviors of individuals with those of their simian ancestors, I am not trying to disparage the political activity of humans – nor, for that matter, of other primates. I am only saying that there is a dimension of ruling that has not yet been adequately explored. People may choose to ignore their animal heritage by interpreting their behavior as divinely inspired, socially purposeful, or even self-serving, all of which they attribute to being human; but they masticate, defecate, masturbate, fornicate, and procreate much as chimps and other apes do, so they should have little cause to get upset if they learn that they act like other primates when they politically agitate, debate, abdicate, placate, and administrate, too.

As it happens, of all the fields of human endeavor, politics seems to be the one most rooted in primitive primate behavior. . . . In contrast to the arts and sciences, which require the use of mankind’s highest mental faculties, located largely in the neocortex, the most evolutionarily advanced part of the brain, the striving for political power seems fueled more by secretions from man’s nether parts – his gonads and adrenal glands – as well as activity from within the limbic system and hypothalamus, the most ancient parts of the brain, all of which deal with such instinctive responses as fight-or-flight, territoriality, aggression, sex, and survival.

— from *King of the Mountain: The Nature of Political Leadership* (University Press of Kentucky, 2002)

Using his scale, Ludwig went on to score his 377 chosen leaders. His findings revealed seven clusters of traits that separate the great from the non-great rulers, which he termed the “Seven Pillars of Political Greatness”:

- overwhelming desire for social dominance and leadership
- contrariness, rebellion against existing authority
- personal charisma
- change agency, initiation of large-scale social change
- vanity, self-confidence
- courage, risk-taking
- a wary unease, a chronic psychological unease

As Ludwig analyzed his data, he came to hypothesize that the key to understanding political leadership is found in evolutionary theory. The connection evolved during the course of his work, as he was able to establish a number of similarities between what he calls “the primate model of ruling” and characteristics of human political leaders.

According to Ludwig, both humans and non-human primates are motivated by the evolutionary desire to establish a

hierarchical society of power and dominance. Because such societies require a single dominant leader, a drive for social dominance had to evolve to ensure the survival of the community. Ludwig writes, “The drive to be the alpha male provides the basic impetus for the dominance hierarchy, which . . . seems to govern most social interactions among higher primates.”

As Ludwig drew similarities between human and non-human primate rulership in *King of the Mountain*, he arrived at these conclusions:

All nations have rulers. Despite anarchy, juntas, and troikas, one person almost always emerges to take charge.

Essentially all the rulers of all the countries in the world during the past century have been men. In addition to citing the sociological factors that contribute to male dominance, Ludwig contends that man’s striving for political power is also fueled biologically by secretions from his gonads and adrenal glands as well as activity from the limbic system and hypothalamus, the most primitive parts of the brain.

Of the nearly 2,000 leaders of the 20th century, only 1.4 percent were women. Half of the women Ludwig studied became rulers by succeeding their martyred or revered husbands or fathers.

In many societies throughout the world, male rulers have a decided breeding advantage over other men, not only in access to women, but also in the size of their harems and the number of mistresses they keep.

No identifiable form of intelligence, talent, genius, or even experience seems necessary to rule a nation.

Leaders need not be sane, rational, or even mentally competent to rule a country.

Although intellectual or academic credentials seem irrelevant for ruling, one of the time-honored ways individuals establish their qualifications for leadership is by showing physical prowess and courage in battle.

Throughout history, rulers who attain legendary status often tend to be those who have conquered other nations, won major wars, expanded their country’s boundaries, founded new nations, forcibly transformed their societies, and imposed their own beliefs on their subjects.

Ludwig also argues that ruling is the most dangerous professional activity because of assassination, execution, imprisonment and exile, coups, public riots, mental breakdowns, and suicides. He notes that rulers are disproportionately likely to die of unnatural causes because they tend to approach risks in a rather irrational manner. As Ludwig explains from a psychobiological perspective, “The reason is once the hypothalamus of male primates becomes activated and stimulates their testicles to manufacture testosterone and other androgens, which increase their sexual libido, aggressiveness, and competitiveness, they are inducted into the struggle for dominance and lose all sense of perspective and rationality.”

In addition, he found that the rate of drug abuse, alcoholism, and mental illness is often higher among the rulers than in the general population. The lifetime rate of mania is especially high among tyrants and visionaries, who are also likely to suffer from paranoid conditions.

From the cover of *King of the Mountain*, which depicts an ape wearing a crown, to the book’s final chapter, Ludwig uses colorful anecdotes and humor to illustrate his points. “When I initially tried several times to write the book with a more serious tone, I found myself becoming depressed and troubled by the terrible crimes and awful decisions of so many rulers,” said Ludwig.



Is there a Mussolini for every culture?

Ludwig's commentary about the sexual promiscuity of leaders has some humorous touches while imparting relevant statistics: "From the many photographs of the male rulers I have examined, only a small minority qualify as handsome and hardly any seems sexy, although I probably do not have the proper hormones or inclinations to judge objectively. So, for the vast majority of rulers, their seductive or coercive appeal for women has to rest mostly on their prominence and power." If his theory holds, he goes on to note, "rulers with the least curbs on their powers – namely, monarchs and tyrants – should engage in more philandering over the course of their married lives than those with the most curbs on their power – namely, leaders of established democracies. . . . Within my entire sample of married rulers, at least 57 percent were sexually promiscuous, a rate substantially above that noted by the Kinsey Institute [37% for married American Men]." According to Ludwig, monarchs had a sexual profligacy rate of 87 percent; tyrants, 95 percent; and democrats, 40 percent.

His consideration of authoritarian rulers is representative of Ludwig's approach. First, he defines the category: "Unlike totalitarian governments with visionary leaders, authoritarian governments do not operate under an all-pervasive ideology and often suffer some pluralism in society. The primary purpose of *authoritarians* is to preserve law and order, maintain social stability, and keep the machinery of government working."

Next, Ludwig provides examples from 20th-century history, including Augusto Pinochet, who, as Ludwig tells it, "led the bloody military coup that toppled the Marxist government of President Salvador Allende of Chile in 1973. . . ." Some of the psychiatrist's observations become clearer here, as when Ludwig notes that Pinochet, born into a lower-middle-class Catholic family of modest means, served

as occasional confidant for his mother and as a surrogate parent to his younger siblings while his father worked away from home.

"A poor to average student [at the National Military Academy], he compensated for his academic deficiencies by his devotion to duty, his love of discipline, his loyalty to his superiors, and his enthusiastic embracing of the spit-and-polish drills. . . . Perhaps his greatest asset was his remarkable ability to let everyone feel superior to him, so no one begrudged him his successes. Consistent with his military personality, he also held little respect for democracy. Debate was inefficient, compromise was surrender, and dissent was anarchy."

One of the admirers of *King of the Mountain* is primatologist Frans de Waal, author of *Chimpanzee Politics: Power and Sex Among Apes* (2000). De Waal notes that world leaders, "who love to present themselves as having their peoples' interests at heart, are driven by the same de-

DON'T CALL ME A DESPOT!



Pinochet the Authoritarian.

sire or power recognized by every primatologist as a universal alpha male characteristic." But Ludwig has also been challenged for what critics see as a lack of credible data and theoretical contribution. For example, Robert Rotberg, reviewing *King* in *Compass*, the publication of the Center for Public Leadership at Harvard's John F. Kennedy School of Government, calls the book "intriguing" and praises Ludwig's effective writing style. He describes the book as "a mass of anecdotes strung together in innovative and mostly relevant ways," but argues that it "does not rise to a level capable of providing solid hypotheses or conclusions about central questions of leadership or rulership."

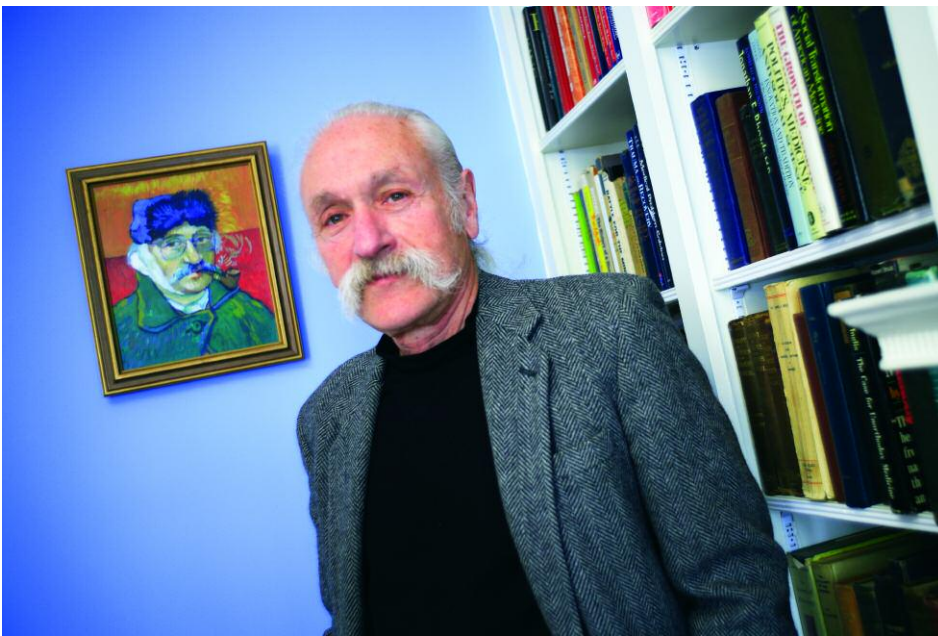
Even if the response to *King of the Mountain* has been mixed, Ludwig has provoked some fresh looks at political power, the place of war and aggression in our society, and the glaring absence of women in power.

"My hope is that some of what was learned from my studies will be taught in schools so that people can make more enlightened choices about their leaders and revise their criteria for what constitutes political greatness."

"Tell Me About Your Earlier Life . . ."

Born and raised in Philadelphia, Ludwig spent his undergraduate years at Swarthmore College. After graduating from the School of Medicine in 1958, Ludwig completed his psychiatric residency at the University of Colorado and then spent two years in the public health service. His next stop was Mendota State Hospital in Madison, Wisconsin, where he served as director of education and research. Then he joined the faculty at the University of Kentucky College of Medicine. Ludwig served as chairman of its Department of Psychiatry from 1970 to 1979 and, in 1980, was named the Evalyn A. Edwards Professor of Psychiatry.

Throughout his career, Ludwig has re-



In his Newport, R.I., home, Ludwig shares space with his artistic alter ego, done in the style of Van Gogh.

ceived several of the most distinguished awards in psychiatry for research and teaching, including the Lester N. Hofheimer Prize for Research given by the American Psychiatric Association. He has also been designated as a Distinguished Lecturer by the association. In addition to *King of the Mountain*, Ludwig has published more than 100 articles and book chapters. His

earlier books have earned extensive critical acclaim.

In *How Do We Know Who We Are?* Ludwig attempts to form a coherent picture of the self, with all its many properties, paradoxes, and contradictions, just as a biographer reconstructs his subjects from letters, diaries, memoirs, and interviews. Ludwig introduces the concept of “biog-

raphical freedom,” arguing that we are free to emphasize, interpret, and fashion the facts of our lives into a meaningful narrative of our own choosing. As he writes, “The terrain of the self is vast, parts known, parts impenetrable, and parts unexplored.”

Ludwig interviewed 21 modern-day biographers to learn how they went about constructing a person from all of their research data, which often contained conflicting points of view. Among the biographers included are Gloria Steinem on Marilyn Monroe, Peter Gay on Sigmund Freud, and David McCullough on Harry Truman.

Using the biographers input and his own observations, Ludwig takes the reader through the process of how such forces as personal experiences, culture, and family all work to make us who we are. As he notes in his opening pages, he wrote the book because “I had no choice”:

“In my clinical work, I found myself intrigued by my patients who were struggling to give voice to their ‘true’ selves. As a scientist, I was drawn toward investigating the contortions of the self when people became psychotic or developed multiple personality or displayed overpowering cravings for drugs or were exposed to such powerful mind-altering techniques as hypnosis, sensory deprivation, or hallucinogens. And in my own personal life, I’ve always collected anecdotes about people from biographies, newspapers, magazines, films, and personal encounters, any tidbits that could shed light on who they were and what made them tick.”

Published two years earlier, *The Price of Greatness* explores the lives and achievements of the world’s most creative and eminent people of our times from the arts, sciences, politics, business, sports, and the military. For this book, Ludwig read more than 1,000 biographies and other publications about his subjects,

LUDWIG'S FORAY INTO FICTION: THE CHAIR OF SURGERY VISITS THE PATHOLOGY LABS

Ten long rows of laboratory benches spanned about two-thirds of the room. The tops were covered with racks of test tubes, containing assorted blood samples, flasks of urine, cartons of stool specimens and miscellaneous bodily fluids, all awaiting analysis. A cacophony of sounds greeted him – the whirring of centrifuges, the whooshing of the flame photometers, the pumping noise of the large refrigerators, the humming of the SMAC/SDM system, the murmuring of the gas chromatographs, autoanalyzers, autoclaves, and mass spectrophotometers, the jarring rings of automatic timers, the machine-gun clacking bursts of automated printing

and the busy babble from other types of expensive machines that had completely revolutionized the clinical lab. Medicine had come a long way from the time when doctors tasted the urine of patients for sugar to make a diagnosis of diabetes. With a natural love for instrumentation, Nick always marveled at this electronic empire. A mechanization that permitted the laboratories to become the philosopher’s stone for the hospital, transmuting those base bodily excrements, cultures, and assorted specimens into gold – perhaps the largest cash cow for the hospital.

— from *Mount Aesculapius* (iUniverse, 2005)

who included such luminaries as German philosopher Friedrich Nietzsche and American playwright Eugene O'Neill, in an attempt to answer a persistent question: Is there a link between creativity and madness?

As in *King of the Mountain*, Ludwig presents his findings in the form of colorful anecdotes supported by theory and data. About one-third of the eminent poets, musical performers, and fiction writers in Ludwig's study suffered from serious psychological symptoms of some kind as teenagers, a rate that increased to about three-quarters when they reached adulthood. From 46 to 77 percent of poets, fiction and nonfiction writers, painters, and composers went through periods of serious depression, at least twice the rate observed in persons in other fields. Mania appeared most often in actors, poets, architects, and nonfiction writers, with lifetime rates ranging from 11 to 17 percent.

Ludwig contends that some professions induce emotional turmoil, while others quell it. Fields that allow for ambiguity and flexibility in creative expression, such as painting, poetry, and fiction writing, more readily accept practitioners with mental disorders and allow them to wrestle with their inner demons in their art. Fields that emphasize accumulated knowledge and structured means of exploration, such as science, attract and promote people with calmer temperaments.

In Ludwig's model, truly great creative achievers generally harbor an ingrained contrariness and opposition to established beliefs, which frequently antagonizes other people; possess a capacity for solitude and self-reliance; face physical trials early in life, often a life-threatening illness or physical disability; emblazon their works and achievements with a personal and distinctive style; and experience a restless, driven state of psychological unease that finds relief through solving problems creatively.



Philosopher Friedrich Nietzsche is among the creative people studied by Ludwig who were troubled by psychological problems.

According to Ludwig, eminent people who manage to avoid emotional turmoil evidently arouse a sense of psychological unease when they feel the need for creative tension. This tactic, notes Ludwig, may pleasantly stimulate mood and behavior, much like mild mania.

Ludwig acknowledges that the subject of creative greatness continues to raise important questions, including the extent to which innate talent shapes great achievements and the role early physical illness and disability play in the lives of eminent people.

One of the reviewers who found *The Price of Greatness* impressive was Mark A. Runco, Ph.D., professor of child and adolescent studies at California State University at Fullerton and editor of the *Creativity Research Journal*. He wrote: "I am not exaggerating when I say that this book is required reading for anyone interested in the nature of creativity and greatness."

From a Mountain to a Mount

In the fall of 2005, Ludwig published his 11th book. A departure in some ways, *Mount Aesculapius* is fiction – but it builds on everything he has learned over the years in the profession of medicine. The book, he explains, was brewing for a long time. As chair of a department and as a member of many high-level committees both at the University of Kentucky and around the country, he "had the opportunity to learn first hand about the many intrigues, power plays for space, money, and influence, and various contentious issues taking place within a medical center." An academic medical center, he continues, "represented a unique, small society within a larger one, with its own language, goals, values, social hierarchy, and mission. . . . Only a novel could do justice to this world."

And, to judge by its heft (676 pages), only a long novel. In fact, Ludwig says his agent told him that, as a first-time

novelist, he would have to cut the draft substantially to appeal to a major publisher. After some failed attempts – “my characters rebelled” – he decided to publish the book on his own through iUniverse, which has backing from Barnes & Noble. (Copies are available through www.iuniverse.com.)

The novel’s setting is Philadelphia’s prestigious Benjamin Franklin School of Medicine, widely known to its admirers as Mount Aesculapius. According to Ludwig’s prologue, Benjamin Franklin School of Medicine traces its origins to the University of Pennsylvania and to the bitter rivalry between John Morgan, the founder, and William Shippen, the would-be founder, of Penn’s School of Medicine. According to Ludwig, Morgan in particular showed some of the traits of leadership described in *King of the Mountain*. Morgan, says Ludwig, ‘was ruthless in his pursuit of power and fame.’ The Franklin School, goes the premise, was established early in the 19th century.

His years of being a department chair seem to have provided Ludwig with an endless supply of raw material for fiction. He is able to suggest the motivations, self-deceptions, and actions of the powerful and near-powerful with a sure satirical touch. Here, for example, is Ludwig’s description of Woodrow A. Barrett III, chairman of the Department of Internal Medicine. In this scene Barrett has concluded his rounds by putting on “one of his heralded clinical performances.”

Then, after this dramatic demonstration of the value of inspection and pal-

pation, he launched into a discourse about the different physical signs and symptoms of other cardiac and circulatory abnormalities. When several students began taking notes, he ordered them to stop.

“I want you to listen and comprehend,” he sternly lectured. “You always can read up on the basic pathophysiology in my textbook. For now, just focus on understanding the principles underlying these clinical abnormalities. If you truly understood what was wrong, you will not need to rely on memorization.”

Then, as he often was wont to do, he slung his arm around the shoulders of one of the awe-struck students, as if they were bosom colleagues, and began asking him about himself as they marched out of the room. His entourage followed, murmuring among themselves and shaking their heads in wonder.

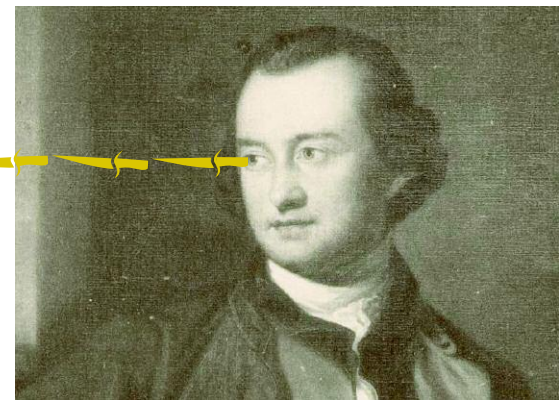
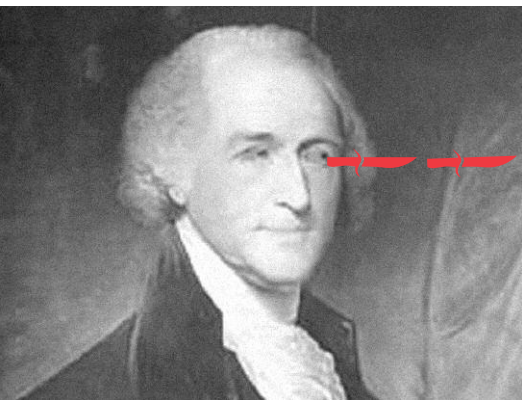
As Ludwig presents the volatile situation at Ben Franklin, the modern incarnations of John Morgan and William Shippen are Phillip Machaon Coffin, dean of the school, and Nicholas Ware, the masterful chair of surgery. The conflict between Coffin and Ware is less personal than professional. Ware and his surgeons strongly resent “running a welfare program for the poorer departments. . . . Under the current financial arrangements, he had no say where the money his Department donated to the Dean’s Tax went.” The dean, of course, feels the current system – which has to support, among other things, the basic science departments – is working well enough. But Ware decides the dean has to go.

At one point, Ware assembles his nine division chiefs, “a gathering of angry warlords, . . . all spoiling for battle.” Much as Maggie Scottsdale, the some-

times unscrupulous chair of psychiatry, is, like Ludwig, an expert in the relationship between genius and mental illness, Ware embodies some of the characteristics Ludwig identifies in *King of the Mountain*: “When he presided over these meetings, Nick Ware always had to be wary about threats to his personal authority by these aspiring alpha males, each seeking to extend the borders of his own fiefdom and, if opportunity permitted, to annex the resources, space, and operating times of his fellow chiefs as well. . . . Almost all of the Division Chiefs were trying to liberate themselves from the monolithic control of Surgery and establish separate departments of their own, each with its own Chair.”

Before the novel ends, readers will recognize many aspects of the life of a modern academic medical center – in fictional form. These include power struggles, difficult searches to fill empty departmental chairs, faked research, financial hanky panky, sexual intrigue, addiction, protests for animal rights, the place of primary care and the place of specialization, a satirical show put on by the students (which cuts quite close and upsets some of the professors) – and the perennial lack of sufficient parking space around the medical center’s campus! *Mount Aesculapius* is not a *roman à clef*, Ludwig insists, but he feels it presents “a more realistic portrayal of an academic medical center and the professionals who inhabit it than any nonfiction account ever could.”

It’s a bold claim, but Arnold Ludwig has never been the shy and retiring type. ♥



William Shippen, left, and John Morgan were bitter rivals.

Jonathan Epstein Assumes Departmental Chair

For the last couple of years, Jonathan A. Epstein, M.D., seems to have been on a mission to redefine the meaning of “fast track.” In 2004, he was promoted to professor in Penn’s Department of Medicine, with a secondary appointment as professor in the Department of Cell and Developmental Biology. He also became the first holder of the William Wickoff Smith Chair in Cardiovascular Research, established through a \$2 million gift from the W. W. Smith Charitable Trust. In 2005, Epstein was appointed the scientific director of the new Penn Cardiovascular Institute. Earlier this year, he was elected to the Association of American Physicians, one of the nation’s most prestigious societies for academic physicians, which numbers Dr. William Osler among its founders. Then in March, Epstein received the Outstanding Investigator Award, the highest honor of the American Federation for Medical Research.

Which brings us to April, when he was named chair-designate of the Department of Cell and Developmental Biology.

As Arthur H. Rubenstein, M.B., B.Ch., executive vice president of the University of Pennsylvania for the Health System and dean of the School of Medicine, put it, “Dr. Epstein is considered one of the world’s leading investigators of the molecular mechanisms of cardiovascular development and their implications for understanding human disease.”

A member of Penn’s medical faculty described Epstein as “a tremendously

creative scientist who has utilized a variety of experimental approaches, including human, mouse, and zebrafish models to elucidate the molecular and genetic mechanisms underlying heart and cardiac outflow tract development and congenital heart disease.” Another calls him “a superbly trained physician-scientist” who has expanded his earlier interests to include the study of tissue regeneration, angiogenesis, and cardiac hypertrophy, “with implications for mechanisms and potential new treatments of heart failure.”

Epstein is also widely known for his commitment to teaching, both on the wards in the Cardiac Intensive Care Unit and in medical school classes. He has also been a director and lecturer in graduate seminars in Genetics and Developmental Biology and has directed the Program in Molecular Cardiology since 2001.

After receiving his B.A. and M.D. degrees from Harvard, Epstein completed his residency and cardiology fellowship training at Brigham and Women’s Hospital. He then received funding from the Howard Hughes Medical Institute to perform postdoctoral research in genetics. He received the Clinician Investigator Development Award from the National

Heart, Lung, and Blood Institute, as well as the McCabe Fellow Award for research that bridges clinical and basic sciences. Epstein came to Penn in 1996 as an assistant professor and was promoted to associate professor in 2001. That same year, he was elected to the American Society of Clinical Investigation and became a councilor of the society in 2004. Epstein is an Established Investigator of the American Heart Association.

“The basic science departments are the foundation upon which all great medical schools stand,” says Epstein. “The dean and the University have taken a bold and laudable step to enhance our ability to bring new therapies to the clinic by investing in the basic sciences at the same time as they build new clinical buildings and enhance clinical resources. Although everyone is eager to translate new findings into clinical practice, we cannot let the fountain of new ideas run dry.”

In the 1990s, the current department evolved from the Department of Anatomy into a more modern research enterprise. Now, says Epstein, the department “stands ready to transform yet again. We will serve as the catalyst to bring cutting-edge stem cell and regeneration

research to Penn, and we will collaborate with the recently formed Cardiovascular Institute and the Institute for Diabetes, Obesity, and Metabolism, among others, to provide a basic science home for institute scientists. . . . We will be expanding into new areas with the same rigorous criteria and expectations.” ▀

— John Shea

Daniel Burke



PENN NEUROSURGERY GOES THREE-DIMENSIONAL

By Kate Olderman

neurosurgeons and neuroradiologists at the

Hospital of the University of Pennsylvania are the first in Philadelphia to use virtual reality, three-dimensional imaging for surgical planning, evaluation, and education.

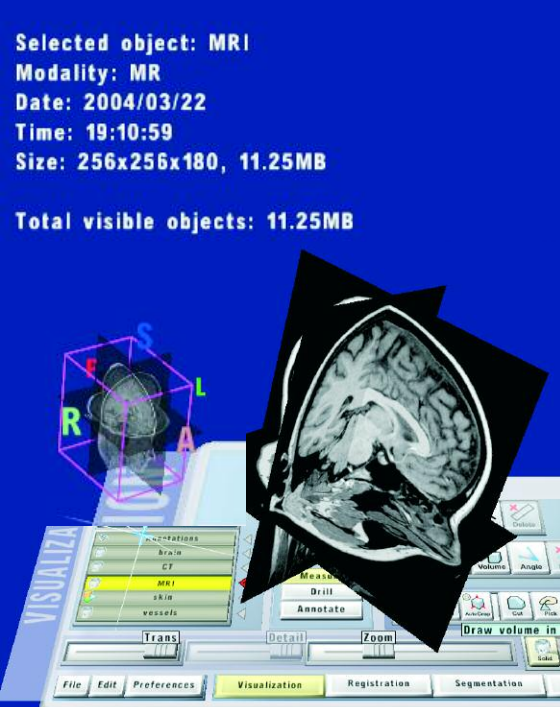
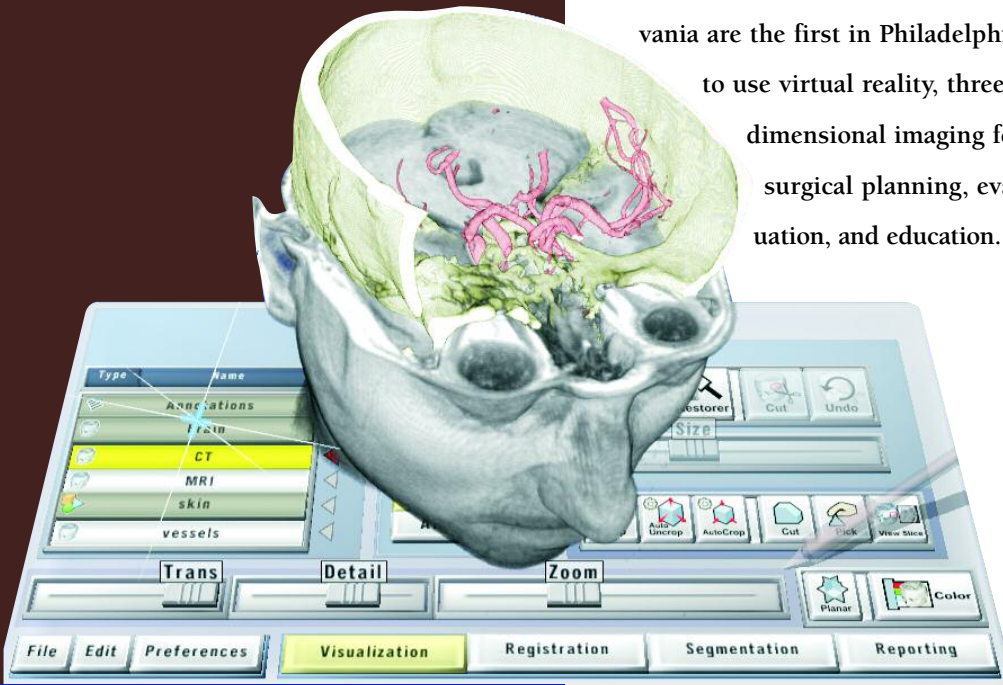
Another Penn neurosurgeon who has been impressed by the Dextroscope technology is Gordon H. Baltuch, M.D., Ph.D., associate professor of neurosurgery and director of the Center for Functional and Restorative Neurosurgery at the Pennsylvania Neurological Institute. Baltuch spoke about Dextroscope at the Volume Interactions exhibit at last year's annual meeting of the Congress of Neurological Surgeons, where he presented a case study on an intraventricular tumor. (accessible on the Dextroscope web site, www.dextroscope.com).

"Using the Dextroscope has already had a profound impact on the way we're technically doing surgery," he says. "We're actually able to offer much more limited corridors to our lesions: smaller incisions, minimally invasive neurosurgery."

The Dextroscope works by fusing multi-modality images – such as CT and MRI – into three-dimensional volumetric objects that, when viewed through special stereoscopic goggles, are transformed into virtual reality, 3-D images. The suspended brain images give surgeons a detailed advance visualization of the complex anatomical relationships and pathology of the patient's brain. In addition, surgeons can easily manipulate the images, in real time, by using a control mechanism and stylus that work in conjunction with the Dextroscope. Such hands-on interaction – which includes "virtual drilling" for planning a surgical path and tools for measuring linear distances and curved surfaces in 3-D space – permits the surgical team to plan and "test" their exact clinical approach.

The Dextroscope, in Baltuch's words, "is a tremendous teaching tool."

According to Grady, the technology can help neurosurgeons at any level of expertise, teaching both basic anatomy and advanced surgical techniques. With this technology, the user can practice a procedure over and over. ♥



Before walking into the operating room, Penn neurosurgeons can now use a Dextroscope® to create interactive 3-D images of their patient's brain and plan the best surgical approach in dealing most effectively with a diagnosed condition. Dextroscope is a product of Volume Interactions, now part of Bracco Diagnostics.

"This superior technology provides remarkable advances in imaging and surgical planning for brain and skull-base tumors and epilepsy," says M. Sean Grady, M.D., the Charles Harrison Frazier Professor and Chair of Neurosurgery. "It allows us to look at the brain in ways similar to how we would during surgery, and then plan the best technique for each patient before we even begin. This is of great benefit to the patient, because it results in a less-invasive surgical process."

Images courtesy of Volume Interactions

THE FINEST HOSPITAL CARE – WITH A DIFFERENCE

THE ENHANCED LEVEL OF SERVICE IN THE PAVILION WILL COMPLEMENT HUP'S NATIONALLY RECOGNIZED PATIENT CARE

By Nicole Gaddis



The Family Business Center (above) and patient room in The Pavilion's current home at Rhoads 3.

Although it would never be mistaken for a hotel room, one of the new private rooms at The Pavilion at the Hospital of the University of Pennsylvania certainly has a few creature comforts. A small refrigerator is stocked with bottled and sparkling water, fruit, cheese, and chocolate truffles; soft sheets are topped off with pillowcases featuring the Penn crest; a terry-cloth robe hangs in the closet. And while these amenities are similar to those found at deluxe hotels, Garry Scheib, executive director of HUP, emphasizes that the medical care provided in the unit “will be exactly the same as every other patient unit in HUP.”

The Pavilion is a natural outgrowth of the Patient Facilitated Services program that was started in 2003. The goal for the program was to provide an enhanced level of service that complements HUP's nationally recognized patient care. “Indeed, the success of this program demanded that we create a dedicated patient unit in order to take this program to the next level,” explains Arthur H. Rubenstein, M.B., B.Ch., executive vice president of the University of Pennsylvania for the Health System and dean of the School of Medicine.



It was PENN Medicine's own donor community that expressed interest in having such services and amenities made available for those willing to pay the extra cost. “Although The Pavilion at HUP is the first to offer these kinds of amenities in the Philadelphia area, many hospitals across the country – including Johns Hopkins, Mount Sinai, and Brigham & Women's – have already been providing these services,” explains Kelly Brennen Abramson, R.N., M.S.N., administrative director of Patient Facilitated Services and International Programs. “It was an opportunity for HUP to remain competitive, and the revenue generated from these extra services will help fund other medical programs, initiatives, and facilities.”

“In October 2005, we celebrated the beginning of a wonderful new era in outpatient care at PENN Medicine with the groundbreaking for the Perelman Center for Advanced Medicine,” notes

Ralph W. Muller, CEO of the Health System. “Now we have the pleasure of marking a milestone for inpatient care at Penn.”

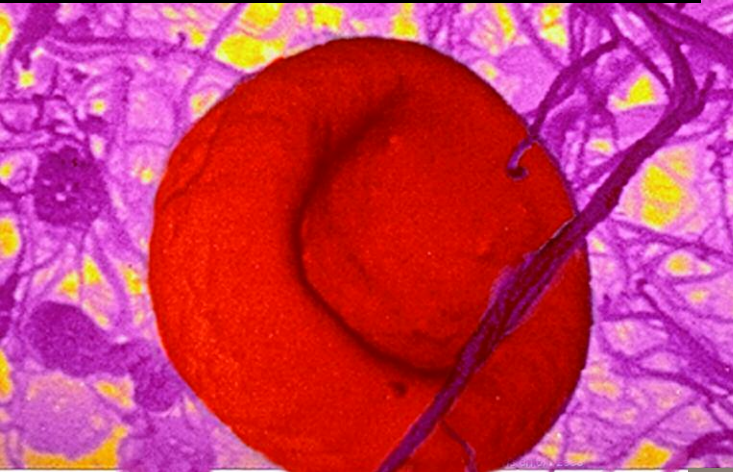
Rooms at The Pavilion, which are currently located on Rhoads 3, are available to any patient admitted to HUP who does not need to be placed in intensive care and whose vital signs are stable.

An individual room is only about \$160 more per night than the hospital's standard single room; suites are also available, and guest suites are available for patients' families. Meals are prepared by a pair of dedicated executive chefs, one of whom was formerly from Lacroix at the Rittenhouse. Each room has a flat-screen plasma television with DIRECTV®. Patients can, for a fee, take advantage of The Pavilion's concierge services: in-room salon services, meals for guests and family members, or parking, just to name a few. A permanent pavilion is scheduled to open in 2009.

“What we will be providing at The Pavilion is just a small part of the kind of service excellence that we hope to bring to the entire Health System,” says Abramson. “From the moment you enter, we will be at your service.” ♥

A matter of FACTT

The research team: (from left) Hongtao Zhang; Mark I. Greene; and Xin Cheng.



By Karen Kreeger

A super-sensitive blood test developed at the School of Medicine may help avoid late-stage diagnosis of cancer and other diseases. The Fluorescent Amplification Catalyzed by T7-polymerase Technique, or FACTT test, is five orders of magnitude (100,000 times) more sensitive than ELISA, a common immune-system-based assay. Mark I. Greene M.D., Ph.D., the John Eckman Professor of Medical Science, Hongtao Zhang, Ph.D., research specialist, Xin Cheng, Ph.D., research investigator, and Mark Richter, a research technician in Greene's lab, reported their findings in an online publication of *Nature Medicine*. In an interview with ABC News, Greene, the senior author, said, "I think this technology will ultimately help change the way we practice medicine, in terms of dealing with the prevention of major problems."

"The current ELISA tests can only detect proteins when they are in high abundance," says Zhang. "But the problem is that many of the functional proteins – those that have a role in determining your health – exist in very low amounts until diseases are apparent and cannot be detected or measured at early stages of medical pathology." According to Zhang, it was important to develop a technique that can discern these rare molecules "to detect abnormalities at an early stage."

The FACTT technology uses a different enzyme amplification system so quantitative signals can be obtained from even a few

protein molecules. The new technology represents the further evolution of an earlier approach that was developed in collaboration with James Eberwine, Ph.D., professor of pharmacology at Penn, which employed radioisotopes. This research was funded in part by The Abramson Family Cancer Research Institute.

The researchers compared how ELISA and FACTT detected Her2/neu in the blood. Her2/neu proteins were in fact first identified by the Greene laboratory in the early 1980s, and the Her2/neu gene was found by other scientists to be overexpressed in breast cancer. Part of the Her2/neu molecule is shed from the surface of tumor cells. Higher blood concentrations of Her2/neu correlate with a lower response rate to chemotherapy and shorter survival time after relapse.

The Greene lab developed mouse models that carry cancer cells overexpressing Her2/neu. When these cells are implanted into animals, they form tumors exactly like breast tumors in humans. Using ELISA, the researchers could not detect Her2/neu from mouse blood until the tumors reached an inoperable size; with FACTT technology, however, they could detect Her2/Neu in some mice when tumors were barely visible and within two days of implantation.

The researchers then compared detection of Her2/neu in humans: they collected blood samples from healthy women and breast cancer patients who did or did not overexpress Her2/neu, as detected by the

most widely used clinical Her2/neu tests — IHC (immunohistochemistry) and FISH (fluorescence *in situ* hybridization). When screened with the new FACTT method, Her2/neu-positive cancer patients showed dramatically elevated Her2/neu levels (average: 384 ng/ml), while the levels in Her2/neu-negative breast cancer patients (19.5 ng/ml) were close to the levels of the healthy control participants (16.6 ng/ml).

Using FACTT, the researchers found that nine out of 10 of the Her2/neu-positive patients had elevated Her2/neu levels and one out of four in the Her2/neu-negative group had elevated Her2/neu levels. Using ELISA, they found only two out of 10 in the Her2/neu-positive group showed elevated Her2/neu levels.

The researchers have also tried the FACTT method on other rare, but medically important molecules, and they will be developing tests for other cancer markers, including lung cancer and colon cancer.

"The technology is remarkably adaptable to any protein and can be performed in an automated format," says Greene. He notes that the technology will soon be robotized so that it will be able to screen for many rare disease-causing proteins using tiny amounts of blood. "It is even possible that one could screen for multiple diseases at the same time and produce a precise accounting of whether disease-causing molecules are present at an early time when disease can be readily treated." ▀



Development Matters

The Board of Women Visitors: HUP's First Volunteers

Only a year after the Hospital of the University of Pennsylvania admitted its first patients, its Board of Managers established a Board of Lady Visitors “to assist the managers in the discharge of household duties and to administer such comfort to the patients as their thoughtful care might suggest.”

It was 1875, Penn did not yet admit women, and this was the first time in the University's history that women fulfilled the responsibilities of a board of overseers. Although members started out primarily as caregivers, the Board took patient advocacy very seriously from the beginning; it petitioned HUP's Managers to create a training school for professional nurses, which was established in 1885. HUP's School of Nursing, distinct from Penn's School of Nursing, trained more than 5,000 nurses in its 92 years of operation.

Nancy Williams is the BWV's new chairperson – and her Penn roots run as deep as the Board's. Her husband, Quincy, is a direct descendent of Benjamin Franklin and received his M.B.A. degree from Wharton. Her father, W. D. Gillen, chaired the University's Board of Trustees during the 1960s and helped establish the Scheie Eye Institute. Her daughter, Alison, received a Ph.D. degree in Pharmacology from Penn. And she's been an active member of BWV since 1984. “My father had a great love for Penn,” Williams says. “I wanted to become more involved as well – and do more.”

Today, the Board of Women Visitors' 21 active members continue to work to improve patient care and comfort, through the activities of its committees:

Inspection Committee. Board members act as representatives for HUP departments, visiting assigned areas on a regular basis, discussing needs and problems with nurse managers, and submitting formal reports.

Abrahamsohn Committee. Founded in 1895 in memory of Oscar Abrahamsohn, an immigrant volunteer, this committee sponsors a Christmas tree-decorating competition at HUP, arranges for “Santa” and carolers to deliver poinsettias to each patient on Christmas morning, and, on Easter Saturday, delivers azalea plants to patients. The Abrahamsohn Committee also sponsors Holly Days, a program providing needy families with clothing, gifts, and food during the holiday season.

The Nearly New Shop Committee. The hospital's volunteer-run consignment shop, located in Ardmore, sells clothing, toys, jewelry, furniture, and bric-a-brac, and holds jewelry, sweater, and Christmas ornament sales at HUP.

Sally Sapega





Every year, the Board's Abrahamsohn Committee sponsors a tree-decorating competition at HUP. One of the winners in December was the staff of Rhoads 3, which took the motif of Dr. Seuss's Cat in the Hat.

The Women's Committee of the University of Pennsylvania Medical Faculty. Made up of doctors' wives, this committee organizes social and fundraising events and reaches out to the wives of new faculty.

The Philadelphia Antiques Show Committee. Last but not least, "The Philadelphia Antiques Show: A Benefit for the Hospital of the University of Pennsylvania" was born when, in 1959, HUP's Board of Managers asked Ali Brown, then Chair of the Board of Women Visitors, to develop a major fundraising project that would also offer something of substance to the community. In one sense, an antiques show seemed a natural choice: "Philadelphia, of course, as everybody knows, has the finest antiques and furniture in the world. . . . The best cabinetmakers were here," Ali Brown is quoted in a booklet about the Show's early years.

But recruiting the top dealers that Brown considered essential to the Show's success was a challenge. A prominent Wilmington dealer told Mrs. Thomas Gates, the Show's honorary chair, that members of old Philadelphia families "were very unlikely to want to procure [their antiques] in other ways rather than inheritance." Brown prevailed, and in April 1962, the first annual University Hospital Antiques Show took place. Renamed The Philadelphia Antiques Show in 1989, the event has long since vindicated its founder's confidence, raising more than \$14,000,000 for Health System

Nancy Williams, chair of the Board of Women Visitors, stands in HUP's Surgical Family Lounge, one of the many areas to receive funding from the Board.

projects. With more than 250 volunteers, the Show Committee now operates largely independently of the Board of Women Visitors. (See accompanying article.)

Funding Improvements to Patient Comfort

As Board members regularly evaluate patient comfort throughout HUP, they often provide the solution to the problems brought to their attention. Above and beyond the funds raised and disbursed by The Philadelphia Antiques Show Committee, the BWV has funded more than 100 projects, totaling more than a million dollars, just since 2000. The Board reviews proposals three times a year, for anywhere from a few hundred dollars for patient literature to \$350,000 to completely revamp a surgical waiting room.

Among the many projects funded by the BWV in the past few years:

- layettes for newborns
- sleep chairs for oncology
- exercise equipment for cardiac and bone-marrow patients
- creation of the Nursing Network Center
- one-day Alzheimer's caregiver seminar
- motivational seminar for chronic hemodialysis patients
- Save A Child fire detector program
- sound system for dermatology surgery unit
- portable blood pressure devices

The Board recently approved Williams's own recommendation to provide \$102,000 in financial support for three HUP employees while they attend nursing school, as part of the Nursing Department's Seedling Program. "The Seedling Program not only helps support our nursing needs, but also benefits these employees, their families, and their communities," she says.

Noticeably more active in funding proposals since 1999, when Felicia Lemonick became chairman, the Board of Women Visitors has received both the Edward S. Cooper Humanitarian Award and a community service award from HUP's Medical Board. Williams credits her predecessor with increasing the Board's professionalism as well as its visibility within the Health System, and she hopes to build on Lemonick's hard work and success.

As Williams puts it, "I want to maintain the momentum we've built and attract a new generation of women with the imagination and energy to lead the Board into the 21st century."

Antiques and Art for New Hearts

*The Philadelphia Antiques Show raises money this year for Penn's **Total Artificial Heart Program.***

In 1962, The Philadelphia Antiques Show's first year, it raised \$40,000 – and that was three times what Ali Brown, its legendary founder, had hoped for.

Since then, the Show has continued to outdo expectations: It has raised more than \$14 million for Health System projects. Last April's 44th Show brought in a net profit of \$866,000, funding in full 2005's beneficiary proposal from the Division of Gastroenterology. Collectors come from all over the country, pay hundreds of dollars for a ticket, and line up hours in advance at 33rd and Market to be first through the doors of the Armory for the Preview. The Show is annually lauded in the pages of *The Magazine Antiques*, *Antiques & Fine Arts*, *Maine Antiques Digest*, and other publications – and *The New York Times* called it “the premier Americana fair” last year.

The Show began with 50 dealers and now holds steady at 56; perhaps three or four of the coveted spots turn over each year, according to the Show manager, Josh Wainwright of Keeling Wainwright Associates, and there are many dealers clamoring to be included.

Where the Show has grown is in its professionalism and the funds it brings in. It now takes a committee of more than 250 volunteers to organize the Show; only public relations and show management are paid for. For Chris Smith, the 2006 chairman, it's more than a full-time job – but one for which she's well-prepared: She had previously organized a smaller antiques show, and like all Show chairs, she's rotated through several executive board committees in her 10 years with the Show. “We're a pretty well-oiled machine,” Smith says.

Each year's Show has a theme, with a museum-quality loan exhibition and lectures structured around it. Joan Johnson is in charge of the theme – she's collected American antiques for 50 years, serves on the executive committees of the boards of trustees for both the Philadelphia Museum of Art and the American Folk Art Museum in New York, and has far-reaching contacts in the arts and antiques worlds. She plans



Recently restored, Mount Pleasant is one of the Fairmount Park mansions on the Antiques Show's trolley tour. Library shown here. Photo: courtesy of the Philadelphia Museum of Art.

five years in advance, inviting, for example, an expert who is writing a book on a particular topic to curate the Show's similarly themed exhibit to coincide with the book's release.

This year's theme, “The Schuylkill Villas,” arose from Johnson's knowledge that the Philadelphia Museum's Park House Guides were interested in promoting Fairmount Park's 18th century houses – and that the restoration of Mount Pleasant, the Park's Grande Dame, would be completed early this year. Besides the exhibition, curated by Park House Guide Fytie Drayton, and related lectures, visitors to the Show can take trolley tours of the mansions. “It's the perfect audience, and great publicity for the Park,” says Johnson.

Dealers' rental fees, ticket sales, catalogue advertising, and proceeds from the Show's Eagle Café cover the Show's actual costs, while preview ticket sales and corporate and private underwriting fees become the “profits” that benefit the Health System. Each year, the Show's executive committee evaluates several proposals, and chooses one beneficiary.

This year's recipient is the Division of Cardiothoracic Surgery's Total Artificial Heart Program, which will be the first such program on the East Coast. The total artificial heart, which program director Rohinton Morris, M.D., calls "the Holy Grail of heart surgery," was approved by the Food and Drug Administration in 2003 as a bridge to heart transplant. Its use makes it possible to keep patients with dilated cardiomyopathy – "very common in our patients," Morris says – alive and healthy until a human heart becomes available. Proceeds from the Show will fund three artificial hearts as well as the necessary capital equipment to support the surgical procedure; patient insurance will reimburse the cost of each heart as it is used.

"We hope to implant our first total artificial heart by the end of the summer," Morris says. "New technology is always a little scary – I give the Philadelphia Antiques Show committee a lot of credit for being visionary."

What looked like a pretty good idea at the time has turned into a fundraising powerhouse, and a showpiece, not just for Penn's Health System, but for Philadelphia as well. Mrs. Brown, no doubt, would be proud.

Clockwise, from top:
Triple Chest, c. 1735-1745
Philadelphia Museum of Art

Daybed
Philadelphia, c. 1745-1755
The Dietrich American Foundation

English Delft Charger, c. 1750
Naomi Wood Trust, Woodford
Photo: Charles Gardner



Alumni Events

You can find out more about these and other upcoming events at <http://www.med.upenn.edu/alumni/events/calendar.html>

September

Sunday, September 17-Wednesday, September 20: American Academy of Otolaryngology – Head and Neck Surgery Reception, Toronto, Canada

October

Sunday, October 8-Tuesday, October 12: American College of Surgeons, Chicago

Saturday, October 28: Homecoming 2006. Join fellow alumni for a brunch with the Penn Glee Club before cheering on the Quakers as they take on the Brown Bears.

Monday, October 30: Association of American Medical Colleges Reception. Alumni who live in the Seattle, Wash., area or are attending the annual meeting of the A.A.M.C. are invited to this reception hosted by Dean Arthur H. Rubenstein.

November

Monday, November 13: American Academy of Ophthalmology, Las Vegas

Recent Gifts – Spring 2006

With a \$2.5 million gift to The Raymond and Ruth Perelman Center for Advanced Medicine, **Stanley and Janet Zolot** have dedicated the Yetta Dietch Novotny Mammography Center within the Abramson Cancer Center.

With their \$1 million gift, **Daniel and Suzanne Cohen** will establish the Abigail R. Cohen Intensive Care Nursery at Pennsylvania Hospital.

Marilyn and Robert Birnhak's \$1 million dollar gift to the Perelman Center for Advanced Medicine will create the Tracey Birnhak Nutritional Counseling Program, named in memory of the Birnhaks' daughter.

The F. M. Kirby Foundation has pledged \$2 million to create The F. M. Kirby Professorship in Ophthalmology at the Scheie Eye Institute, supporting research into gene therapies for retinitis pigmentosa, macular degeneration, and other hereditary causes of vision loss.

A \$1 million gift from **George and Lynn Ross** will dedicate and support the Abramson Cancer Center's Patient and Family Services Program in the Perelman Center for Advanced Medicine.

Mr. and Mrs. Leonard Siegel have created a \$1 million charitable gift annuity to honor two Penn cardiologists, Dr. Susan E. Wieggers and Dr. Frank E. Silvestry, and establish an endowment for research and education in noninvasive cardiac imaging.



Progress Notes

Send your progress notes to:

Jason B. Bozzone
Associate Director of Alumni
Outreach and Reunions
PENN Medicine Development
and Alumni Relations
3533 Market Street, Suite 750
Philadelphia, PA 19104-3309

'40s

Stanford B. Rossiter, M.D. '40, emeritus professor at the Stanford University School of Medicine, was profiled in *The San José Mercury News* (February 5, 2006), which described him as the oldest physician on regular duty – 36 hours a week – at Stanford Medical Center and the veterans hospital in Palo Alto. Rossiter, 91 years old, is a radiologist.

'60s

Myron Genel, M.D. '61, G.M.E. '65, emeritus professor of pediatrics at Yale University, was recently elected vice president of the Connecticut Academy of Science and Engineering, a state-chartered society limited by law to 200 members and modeled after the National Academy of Sciences. His two-year term as Academy president will begin in July 2008. Last fall, he was named to Connecticut's Stem Cell Research Advisory Committee, which will direct the distribution of \$100 million allocated by the state's General Assembly.

Lawrence B. Erlich, M.D. '63, G.M.E. '69, is medical director of the Neuroscience Institute of Florida, in Celebration, Fla. A Distinguished Life Fellow of the American Psychiatric Association, he is the author of *A Textbook of Forensic Addiction Medicine and Psychiatry* (2001).

Paul A. Selecky, M.D. '64, Newport Beach, Calif., received the 2005 Robert Angarola Award from the Southern California Cancer Pain Initiative in recognition of his achievements in palliative and end-of-life care. He is medical director of the Palliative Medicine Program at Hoag Hospital (Newport Beach). The hospital received

the 2005 Circle of Life Award, which is presented by the American Hospital Association to three hospitals each year for innovations in palliative and end-of-life care. In 2003, Selecky was the first recipient of the Outstanding Clinician Award given by the American Thoracic Society. A clinical professor of medicine at U.C.L.A., he is also medical director of the Pulmonary Department and the Sleep Disorders Center at Hoag Hospital.

'70s

Bernard Fisher, M.D., G.M.E. '74, the Distinguished Service Professor of Surgery at the University of Pittsburgh, received the Award for Lifetime Achievement in Cancer Research from the American Association for Cancer Research. According to the association, his early work on tumor metastasis paved the way for later hypotheses about the spread of this disease. Fisher used clinical trials to confirm that patterns of tumor spread are not dictated solely by anatomical considerations but are also influenced by intrinsic factors in the tumor cells and the organs they invade. His research is credited with changing the way physicians manage patients with breast cancer.

Marie A. Bernard, M.D. '76, has been elected to the board of directors of The International Longevity Center-USA, a research policy organization in New York City with a staff that includes economists, medical and health researchers, and demographers who study the impact of population aging on society. Bernard holds the Donald W. Reynolds Chair in Geriatric Medicine and is professor and chairperson of the Donald W. Reynolds Department of Geriatric Medicine at the University of Oklahoma College of Medicine. She also serves as the associate chief of staff for geriatrics and extended care at the Oklahoma City Veterans Affairs Medical Center and is director of the Oklahoma Geriatric Education Center.

Richard H. Epstein, M.D. '78, Jenkintown, Pa., has been promoted to professor of anesthesiology at Jefferson Medical College. Recently named director of Anes-

thesia Information Systems, he is responsible for the implementation of the intra-operative anesthesia information system and the development of an integrated electronic medical record system for the pre-operative Patient Testing Center at Thomas Jefferson University Hospital. He is a member of the electronic health-record steering committee of the Healthcare Information Management Systems Society.

Judith A. Fisher, M.D. '78, who formerly worked in Penn's Department of Family Practice and Community Medicine, has joined Martha's Vineyard Hospital. She had been a summer visitor to Martha's Vineyard for the past 22 years. At Penn, she developed a model for community health and taught a varied approach to health care.

Vanessa N. Gamble, M.D. '78, Ph.D., director of Tuskegee University's National Center for Bioethics in Research and Health Care, was elected to the Institute of Medicine of the National Academies. Before joining the Tuskegee University faculty in 2004, Gamble held several different positions with the Johns Hopkins School of Medicine and the Johns Hopkins Bloomberg School of Public Health. She is also the founder and former director of the Center for the Study of Race and Ethnicity in Medicine at the University of Wisconsin-Madison. A frequent member of national committees, she served as chairwoman of the planning committee for the 2005 "Creating a Black Agenda in Bioethics" conference at Tuskegee.

Harold M. Szerlip, M.D. '79, G.M.E. '85, a professor of medicine at the Medical College of Georgia whose research focuses on preventing and treating acute renal failure and evaluating and treating hypertension, has been named to the editorial boards of two professional journals: *CHEST*, published by the American College of Chest Physicians, and the *Clinical Journal of the American Society of Nephrology*. A former associate chair of medicine at Tulane University School of Medicine, Szerlip came to MCG in 2001. He is a fellow of the American College of Chest Physicians and of the American College of Physicians.

Richard C. Wender, M.D. '79, Alumni Professor and chair of the Department of Family and Community Medicine at Thomas Jefferson University, is president-elect of the American Cancer Society. He will become president in the fall. Wender is chair of the Society's Incidence and Mortality Committee and is a member of the editorial advisory board for *CA: A Cancer Journal for Clinicians*, one of the Society's journals.

'80s

Howard Frumkin, M.D. '82, Dr.P.H., G.M.E. '84, was recently named director of the National Center for Environmental Health and the Agency for Toxic Substances and Disease Registry, both part of the Centers for Disease Control and Prevention. He reports that these agencies address a range of environmental health concerns, from hazardous waste sites to air pollution to lead poisoning. Before joining the CDC, Frumkin was professor and chair of environmental and occupational health and professor of medicine at Emory University. His recent books include *Urban Sprawl and Public Health* (Island Press), *Environmental Health: From Global to Local* (Jossey-Bass), and *Safe and Healthy School Environments* (Oxford University Press).

Mark A. Smith, M.D., G.M.E. '82, has been appointed executive vice president of physician services for Altus HealthCare Incorporated. He is responsible for building its physician syndicates in key regional areas. Altus's physician syndicates form the backbone of the Altus Physician Network, a nationwide equity-owned association of "best of breed" surgeons. Smith will continue to operate his private practice in Palm Springs, Calif.

Kenneth R. Beer, M.D. '89, is the founder and owner of Idealskin.com, a web site that features skin-care products that he has formulated. Board certified in dermatology and dermatopathology, Beer has a private practice in West Palm Beach, Fla., where he focuses on cosmetic dermatology and skin cancer surgery. He is a clinical instructor of dermatology at the University of Miami and he holds a

faculty appointment in dermatology at Duke University. He is founder and director of "The Cosmetic Boot Camp," which he describes as the leading training seminar for cosmetic dermatologists.

'90s

Robert H. Glassman, M.D., G.M.E. '90, Short Hills, N.J., was recently promoted to managing director of Healthcare Investment Banking in Merrill Lynch's Mergers and Acquisitions Group. He remains on the faculty of Weill Medical College of Cornell University, in its Division of Hematology and Medical Oncology, and continues to see patients.

James M. Musser, M.D., Ph.D., G.M.E. '91, has been named the Fondren Foundation Distinguished Endowed Chair, executive vice president, and co-director of The Methodist Hospital Research Institute in Houston, Texas. Musser also serves as director of the Center for Molecular and Translational Human Infectious Diseases Research at the Institute and as vice chair of the Department of Pathology at The Methodist Hospital.

Paul Fragner, M.D., G.M.E. '92, an orthopaedic surgeon at White Plains Hospital Center, has been appointed as a medical consultant to the New York Rangers ice hockey team. He is a partner with Bone & Joint Associates in North White Plains. His subspecialty includes hand and wrist problems. In addition to sports injuries, Fragner treats carpal tunnel syndrome, tendonitis, arthritis, and children's problems of the hand, wrist, and elbow.

Brian S. Cain, M.D. '93, Piedmont, Calif., and his wife, Janice Cain, C.R.N.A., have welcomed their second child, Bailey Cain. Brian is an adult cardiac surgeon and Janice is a nurse anesthetist, both at Kaiser Permanente in Oakland.

'00s

Jonathan E. Cryer, M.D. '00, is an otorhinolaryngologist who serves on the medical staff of Cayuga Medical Center in New

York and is in practice at Cayuga Ear, Nose, Throat – Head and Neck Surgery. He recently wrote a "Health Watch" column on tinnitus for *The Ithaca Journal*.

OBITUARIES

O. Norris Smith, M.D. '33, G.M.E. '37, Greensboro, N.C.; October 25, 2004.

Marcus D. McDivitt, M.D. '38, Tucson, Ariz.; April 19, 2005.

Franklin B. Husik, M.D. '40, Glassboro, N.J., a retired physician; September 21, 2005. He took his internship at Philadelphia General Hospital and completed his residency in Florida. In addition to treating patients at his home, he also served on the staff of Ancora Psychiatric Hospital and was a consulting physician at Glassboro State College (now Rowan University). He was among the staff members at Elmer Hospital when it opened in 1950.

Carlos M. Gutierrez, M.D. '41, San José, Costa Rica, retired chief surgeon of oncology at Hospital San Juan de Dios; June 14, 2005. Following his retirement, he was ambassador to the United Kingdom; he also represented Costa Rica in the Scandinavian countries. He was Caballero de Gracia Magistral in the Order of Malta.

James E. McMillan, M.D. '41, Scottsdale, Ariz.; January 8, 2002.

Robert L. Mayock, M.D. '42, G.M.E. '46, Wynnewood, Pa., a pioneer in pulmonary medicine at Penn; January 30, 2006. He founded the modern pulmonary division, one of the first in the U.S., at the Hospital of the University of Pennsylvania. His colleagues and students knew him as a trailblazer in the care of pulmonary medicine and as a role model. Mayock trained more than 180 pulmonary physicians during his career, many of whom are today's leaders in the field of academic and clinical pulmonary medicine. He taught his students always to be mindful of the three "A's" of a successful medical practice – Availability, Affability, Ability. His medical career started off remarkably. In 1942, as a medical student, he contracted tuberculosis (TB); he survived

and became immune to it, then went on to treat others who were afflicted with the disease. After serving in the army from 1952-1954 and caring for soldiers who returned from the Korean War with tuberculosis, Mayock brought his unique experience with TB to the Penn campus. Along with renowned physician and scientist Julius Comroe Jr., M.D., Mayock also established one of the first two-year fellowship training programs in pulmonary medicine at HUP, which became the model in other academic medical centers. Later, he shifted his attention to sarcoidosis, a disease similar to TB that has no known infecting organism. He built a clinic at HUP to treat those who had it; and he is known in the medical community for writing several important papers on the topic. He served as chief of the pulmonary disease section at Penn for nearly two decades, stepping down in 1972. He also served as chief at the Philadelphia General Hospital where, in 1955, he founded the School of Respiratory Therapy – the first of its kind in the United States. He was active in many professional organizations and served as chairman of the American Thoracic Society. Mayock also led the effort to remove all cigarette vending machines inside HUP and helped the American Lung Association in its push for a "smoke free" society.

Henry Brown, M.D. '44, G.M. '48, Waban, Pa.; October 15, 2005. A hand surgeon, he did clinical work in Liberia and conducted research in Buenos Aires, Argentina; the Sorbonne in Paris; and Cambridge University, England. He ran in the Boston Marathon for twenty-five years.

Roland A. Mariani, M.D. '44, New London, Conn.; September 23, 2004.

Jay H. Portner, M.D. '44, G.M.E. '45, G.M. '49; Wyncote, Pa.; October 18, 2005. He was former chair of surgery at Elkins Park Hospital.

Victor Newcomer, M.D., G.M.E. '49, Santa Monica, Calif.; March 15, 2002.

Wayne F. Spenader, M.D. '49, Mendota, Ill.; January 28, 2001.

George S. Watson, M.D., G.M. '49, Plympton, Mass.; June 24, 2003. He served in the Navy during World War II as head of tropical medicine at Bethesda Naval Hospital. Later, he was also superintendent of Lakeville Hospital in Massachusetts and Grasslands Hospital in New York. A member of Physicians for Social Responsibility, he served on the Plympton Board of Health.

Paul F. Zito, M.D., G.M. '50, Key West, Fla.; February 18, 2005. He served as a medical officer in the Navy during World War II. Following his training at Penn, he became assistant chief of surgery at the U.S. Marine Hospital in Staten Island, N.Y. He served as councilman for the City of Perth Amboy, N.J., from 1982 to 1990.

Nathan L. Comer, M.D., G.M.E. '51, Narberth, Pa.; November 21, 2005. A psychiatrist, he maintained a private practice until his recent illness, with offices in his home and at the Institute of Pennsylvania Hospital, where he had served as president of the medical staff. He was on staff and taught at many Philadelphia area hospitals and had been a clinical assistant professor of psychiatry at Penn.

George Gittelson, M.D. '51, Palm Beach, Fla.; March 8, 2005.

Lewis Sumner Thorp, M.D. '52, Rocky Mount, N.C.; August 17, 2005. His practice at Boice-Willis Clinic in Rocky Mount spanned 41 years until he retired in 1994. Over the last decade, he served as a consulting physician on Social Security disability. He was the director of medical special initiatives and clinical director of the Area L AHEC (North Carolina Area Health Education Center). He also served as medical director of Guardian Care Nursing Home.

J. Peter Muhlenberg, M.D. '54, G.M.E. '58, Wyomissing, Pa.; October 28, 2005.

Lindley M. Winston Jr., M.D. '54, Malvern, Pa.; August 14, 2005.

Charles C. Wolferth Jr., M.D. '54, G.M.E. '59, Gladwyne, Pa., the retired head of the Department of Surgery at Graduate Hospital; November 15, 2005. A nationally



known expert in medical trauma, he spearheaded a state law in 1985 that created the Pennsylvania Trauma Systems Foundation. His goal was to help prevent victims from dying needlessly during the so-called golden hour, the first 60 minutes of care that can make the difference between life and death. During his 44-year career, he was a department head, surgeon, and teacher at HUP, Hahnemann University, and Presbyterian Hospital, among other hospitals. He received many awards, including the National Safety Council Surgeons Award for Service to Safety. His father, Charles C. Wolferth, was a HUP cardiologist.

Ralph Cash, M.D. '56, Southfield, Mich., a retired pediatrician; October 25, 2005. After taking his internship at Sinai Hospital of Detroit, he was a pediatric resident at The Children's Hospital of Philadelphia. He began his long association with Wayne State University School of Medicine as a clinical instructor in 1960 and became emeritus professor there in 2003. He served as chairman of pediatrics at Sinai Hospital of Detroit from 1972 to 1985 and was an attending physician at Children's Hospital of Michigan from 1959 until his death. Cash was vice chief of staff at Sinai Hospital for two years. In 1972, he received the Teacher of the Year Award at Children's Hospital of Michigan. In 1981, he was named "Physician of the Year" by the National Dysautonomia Foundation, on whose medical advisory board he served for 27 years. He was honored as "Humanitarian of the Year" by the March of Dimes Foundation of Michigan in 1989. He wrote newspaper columns for the *Detroit Free Press* on pediatric issues (syndicated by Knight Ridder) and appeared frequently on radio call-in shows and a Detroit TV morning show.

Warren J. Robbins, M.D. '57, Lancaster, Pa., a retired orthopaedic surgeon; November 11, 2005. After medical school, he enlisted in the Army and took his internship and residency in orthopaedic surgery at Walter Reed Army Medical Center. Among his posts was the Army hospital in Valley Forge, where he was chief of surgery. Retiring from the Army as a lieutenant colonel in 1967, he opened

a private practice in Lancaster. He served on the staff of both Lancaster General Hospital and St. Joseph Hospital.

Joseph N. Vizzard, M.D., G.M.E. '59, Scotts Valley, Calif.; May 19, 2005.

Conrad H. Nebeker, M.D. '62, Ogden, Utah; November 26, 2005.

Alan I. Mandell, M.D. '69, G.M.E. '73, Memphis, Tenn.; March 14, 2005.

Henry B. Polin, M.D. '75, Seattle; November 13, 2005. In a recent issue of *Puget Sound Consumers' Checkbook*, he was listed as one of the top-rated primary-care physicians in the area. After residencies at the State University of New York and Buffalo General Hospital, he came to Seattle for an advanced course in pulmonary medicine at the University of Washington and remained in Seattle for his medical practice. He spent the past decade in practice at The Polyclinic on Seattle's First Hill. The recipient of a master's degree in German from Yale University, he served as physician to the German consulate in Seattle for several years. A car enthusiast, he had recently written two articles, one about German cars, that were published in *Road & Track* magazine.

Richard I. Perzley, M.D., G.M.E. '77, Kingston, N.Y.; May 10, 2005. In 2002, he joined the Mid-Hudson Family Health Institute in Kingston as medical director of the pediatric care center. A graduate of Jefferson Medical College, he had been in pediatric practices in Chapel Hill, N.C., Wilmington, Del., and Philadelphia, among other locations. He was a Fellow of the American Academy of Pediatrics, the North Carolina Medical Society, and the North Carolina Pediatric Society.

FACULTY DEATHS

Nathan L. Comer, M.D., G.M.E. See Class of 1951

Robert L. Mayock, M.D. See Class of 1942.

Charles C. Wolferth Jr., M.D. See Class of 1954.



Like Father, Like Son

When it came time to choose a career, the young W. Benson Harer Jr., M.D. '56, was sure of one thing: he did not want to go into medicine. He figured his father, W. Benson Harer Sr., College '17, M.D. '21, a renowned Penn obstetrician and former president of the Pennsylvania Medical Society, would be a hard act to follow.

Despite his misgivings, Harer entered his father's alma mater in the fall of 1952. "My first year of medical school was a dreadful bore," he says. "But I stuck it out. Then, it all got better because I met Pamela." His wife of 53 years graduated from the Penn's College for Women in 1956.

Coincidentally, Harer was studying labor and delivery when the first of their four children was born. "My view of Ob/Gyn transformed completely and I finally understood my father's passion. The field was about watching a new life emerge. I decided that I did indeed want to follow in his footsteps."

Following his residency at HUP in 1960, Harer had a successful private practice in San Bernardino, Calif., for more than 30 years. Career highlights include serving as president of the San Bernardino County Medical Society and of the American College of Obstetricians and Gynecologists.

To celebrate his 50th reunion this year, Harer created a charitable gift annuity benefiting the Department of Obstetrics and Gynecology. "I owe much of my success to Penn, and I feel very fortunate to be a graduate," he says.

In addition to returning to his "beloved campus" to reminisce with old friends, Harer will also be a guest speaker, leading a presentation on his other great passion — the history and culture of ancient Egypt. He is an adjunct professor of Egyptology in the humanities department at California State University at San Bernardino. He has written numerous articles on Egyptology, including several that combine his knowledge of medicine with his passion for ancient history and archeology.

Reflecting on his alma mater, his career in obstetrics, and his philanthropy to the School of Medicine, Harer gratefully acknowledges the model his father provided: "I am proud to follow in his path."

Harer's charitable gift annuity helped him find a way to make a significant gift, while obtaining a current income tax deduction and the security of guaranteed, partially tax-free, lifetime payments. This is just one of a multitude of creative gift opportunities that benefit both the School of Medicine and its donors. As you chart your financial future, the Planned Giving Office is ready to assist in developing an appropriate strategy. Contact Marcie Merz, J.D., Director of Planned Giving, PENN Medicine, 3535 Market Street, Suite 750, Philadelphia, PA 19104-3309 or e-mail: mmerz@ben.dev.upenn.edu.

Translational Medicine: Some First Steps

At academic medical centers, we are hearing the term translational medicine more and more these days. From every indication, it will be one of the most important themes for PENN Medicine and our peer institutions for many years to come. But what do we mean by it?

Translational medicine appears to have followed closely on the heels of translational research, but the terms seem largely synonymous. What is implicit in translational medicine – the broader term – is that the research usually precedes and informs the practical application of the medicine, whether it be a new drug or a new therapy. We often describe translational medicine as the process of moving discoveries from the laboratory to the patient for clinical use – from the bench to the bedside. At the same time, the process can move the other way, so that clinical care can direct and inform the research.

Translational research, however, has a sense of greater urgency about it than research in general. As the authors of “Translation in the Health Professions: Converting Science Into Action” put it: “At present, it may take as long as one or two decades for original research to be translated into routine medical practice. . . . Without effective translation, the fundamental aspects of quality health care – effective, efficient, current, and timely care that could save many lives – cannot be achieved” (*Evaluation & The Health Professions*, March 2006).

At PENN Medicine, the centrality of translational medicine was made explicit more than three years ago in our strategic plan. In the first section, where we present our vision, this passage emphasizes the need to connect and translate:

“To benefit from the opportunities that lie ahead, greater collaboration among researchers, clinicians, and educators is required; and, in particular, the collaboration that springs from a mutual appreciation of respective and complementary skills.

Robert Clink



This collaboration is facilitated by establishing an intellectual environment in which highly talented individuals are working together in teams to integrate a full continuum – from basic science to clinical practice to population health observations and back to basic, translational, and clinical research – to achieve remarkable results in research, patient care, and education. Strengthening the interrelationship at the intersections of these dimensions presents tremendous potential for the prevention and cure of disease and improvement in the human condition. . . .”

As described in the research section of the Plan for PENN Medicine, strengthening translational and patient-oriented research is a specific goal. The Plan also urges us to make creative use of our world-class University and to “build new linkages both within the University and to the private sector.”

The explosion of knowledge over the past few decades has made it virtually impossible that today’s individual biomedical investigators can be Renaissance men or women, knowledgeable about all aspects of their fields and related fields. Therefore, we must look to teams, linkages, interrelationships. One of the most effective ways to enhance the team approach is through centers and institutes that bring together a diverse group of talented people. Penn has long been noted for its many centers; now our mandate is to use them more effectively – or create new ones that will focus on selected areas and provide necessary infrastructure, space, and leadership.

One of the important steps we took in this direction was formally establishing three new institutes in January 2005. Only the Institute for Translational Medicine and Therapeutics (ITMAT) has *translational* in its name, but both the Penn Cardiovascular Institute and the Institute for Diabetes, Obesity, and Metabolism share with it a general impulse to bring the fruits of research to the patient as swiftly and safely as possible. All three also seek to alleviate major, complex problems. In the case of ITMAT, the focus is drug discovery and development. This spring, at the first symposium ITMAT has sponsored, Garret FitzGerald, M.D., its director, asserted that what we have at present is “a broken model of drug development . . . a highly inefficient and costly process.” In recent years, new drug approvals have been stagnant at best. Bringing together basic researchers and clinicians from Penn and beyond, as well as representatives from the pharmaceutical industry, regulatory agencies, and government, the symposium can serve as an example of a translational approach in microcosm.

As our Plan for PENN Medicine makes clear, support for translational medicine does not mean a withdrawal from basic research. We will continue to support our basic scientists, whose work is the foundation of subsequent developments. Yet, as the recent ITMAT symposium underscored, the present state of drug development is not working well, and effective translational research can make a tremendous difference there and in many other areas of medicine.

With the explicit encouragement of the National Institutes of Health, translational medicine will play an important role in our academic medical centers. We will keep you up to date on what happens at Penn. ♥

Arthur H. Rubenstein, M.B., B.Ch.
*Executive Vice President of the University of Pennsylvania for the Health System
Dean, School of Medicine*



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