

The New Penn Clinical Simulation Center

Where Safer Medical Procedures Become Practice

Today, medical simulation is critical for physicians who want to learn new techniques and provide more comfortable and quicker recoveries for patients. Practitioners are also discovering that simulations can play a vital role in minimizing complications, including infections, and decreasing length of stay.

Dr. Richard P. Shannon, chair of the Department of Medicine, explains, "To solve patient care problems as they occur, multidisciplinary teams must first rehearse scenarios using patient simulators. This

allows everyone to understand Penn's standardized procedures, and their specific roles, in an unambiguous way."

Soon physicians, nurses, and other healthcare professionals will be able to benefit from such realistic practice at the multi-million dollar Penn Clinical Simulation Center. With support from the *Making History* campaign, this new facility will be housed in PENN Medicine at Rittenhouse and offer 21,000 square feet for simulation training and continuing medical education. Opening this summer,

the Center is a shared endeavor between the Health System, the Clinical Practices of the University of Pennsylvania, and the School of Medicine.

A simulated operating room, emergency department, intensive care unit, and labor and delivery room are planned for the center. There physicians, nurses, residents, and other professionals will be able to rehearse procedures for general surgery, interventional radiology, obstetrics and gynecology, ophthalmology, emergency medicine, and other invasive medical

procedures (e.g., endoscopy, bronchoscopy, cardiac catheterization).

Put simply, "simulation technology is the future," says Dr. James L. Mullen, professor and vice chair of Surgery and corporate director of Perioperative Services at the University of Pennsylvania Health System.

• If you would like to learn about giving opportunities for the Penn Clinical Simulation Center, please call Kim Grube at 215-746-3007.



Medical Director of the Pancreatic Islet Transplantation Program, Dr. Michael R. Rickels follows up with a patient. Considered one of the most promising diabetes therapies, islet transplantation advances will be supported by gifts to the Benaroya Challenge.

new sources in order to receive the Benaroya Foundation's \$1.5 million. The matching grant means that your personal donation in support of diabetes research at Penn will be increased by 50 percent! To date \$700,000 has been raised; we need your help to close this considerable gap by the challenge deadline of June 30, 2008.

• To learn how you can contribute to the Benaroya Challenge, please call Carol Forte at 215-898-0578.

CREATE KNOWLEDGE

The Cholesterol Drug Maze:

A CARDIOLOGIST'S PERSPECTIVE

LAST MARCH, HEALTHCARE CONSUMERS FOUND THEMSELVES IN A FAMILIAR SITUATION: WONDERING HOW IT COULD BE THAT AN FDA-APPROVED DRUG THAT HAD GENERATED \$5 BILLION IN SALES COULD APPEAR TO BE LESS THAN AN OPTIMAL PERFORMER.

A new study suggested that Vytorin, Merck and Schering-Plough's blockbuster, LDL-cholesterol lowering drug, was no more effective at limiting plaque build-up — a major cause for heart attacks and stroke — than a generically available medication.

Though not involved in studies of Vytorin, PENN Medicine's Dr. Daniel Rader approaches the problem as both a clinician and a researcher. Internationally recognized for his cholesterol research, Dr. Rader is frequently called upon by the *Wall Street Journal*, *New York Times* and other media for insight into the medical issues that affect so many people.

According to Dr. Rader, the current complexity of the state of cardiovascular drugs owes much to the national sense of urgency about reducing the devastating toll of heart disease. If a medication is deemed innovative and life-saving, the FDA will fast-track its approval by assessing efficacy partly through surrogate markers, such as cholesterol levels, rather than measuring ultimate, intended outcomes, such as lower rates of heart disease.

Given our current state of knowledge, Dr. Rader doesn't believe that generalizations about good and bad cholesterol are all that useful to consumers.

Supporters of fast-tracking say it saves years and untold expense that would otherwise drive up consumer costs and discourage pharmaceutical companies from researching new treatment options. Detractors say that fast-tracking limits the opportunity to detect safety issues and may not clearly evaluate efficacy.

Dr. Rader is currently leading a large study on genetic variations that cause high HDL — often known as the "good" cholesterol. As he and other investigators continue their work, his will continue to be an important voice in the national debate on how best to bring safe and effective drugs to market.

• To learn more about giving opportunities for faculty support, please call Allyson Randolph at 215-898-1034.



Dr. Hurtig (shown left), the current chief of service of the Department of Neurology at Pennsylvania Hospital and nationally prominent Parkinson's researcher, became the Frank A. and Gwladys H. Elliott Chair of Neurology in 2007. His chair is one of two made possible by a bequest so far during the campaign. Legacies, charitable annuities, and other planned gifts are an important component of our campaign. For instance, bequests and annuities have accounted for \$33.5 million of the campaign total through April.

Bequest Creates First Endowed Chair for Pennsylvania Hospital

Leading Parkinson's disease specialist Dr. Howard Hurtig has been named the first holder of the Frank A. and Gwladys H. Elliott Chair of Neurology. The Elliott chair is the first ever endowed university position at Pennsylvania Hospital.

Penn's School of Medicine and Pennsylvania Hospital, the nation's first, have enjoyed a relationship of varying formality over the past 250 years. The hospital was the original training ground for Penn medical students until the 1870s, when the medical school moved to West Philadelphia. In 1997, Pennsylvania Hospital and UPHS merged, organizationally uniting the School of Medicine and Pennsylvania Hospital once again.

The chair was funded through the estate of Dr. Frank A. Elliott; he established the Department of Neurology at Pennsylvania Hospital in 1959. It was his request that the chair be awarded to a researcher/practitioner at Pennsylvania Hospital.

During his tenure at Pennsylvania Hospital, Dr. Elliott focused mainly on stroke prevention. In the 1960s, he developed one of the first stroke risk-analysis clinics in the U.S. His initiatives to recruit accomplished neurologists and begin a residency training program helped establish Pennsylvania Hospital's current strength in the neurosciences.

The Elliott chair is an important milestone, according to Glen Gaulton, Ph.D., the executive vice dean and chief scientific officer of the School of Medicine. "This new chair recognizes our shared ambition to integrate excellence in medical research, care, and education in all we do," said Dr. Gaulton.

Dr. Kate Kinslow, Pennsylvania Hospital's executive director, noted, "With his clinical expertise and creative vision, Dr. Elliott altered how neurology was practiced here at Pennsylvania Hospital, following in the footsteps of many medical pioneers who worked here before him. Now Dr. Hurtig is expanding that vision in a whole new clinical arena, to the benefit of our patients."

Added Dr. Francisco González-Scarano, professor and chair of the Department of Neurology, "This generous bequest from a physician who was a long-term member of the Penn community cements the relationship between Pennsylvania Hospital and Penn's Department of Neurology. Howard Hurtig was not only Dr. Elliott's successor and friend, but is also a superb clinician and a worthy recipient of this honor."

Dr. Hurtig is the current chief of service of the department of neurology at Pennsylvania Hospital. He has continued Dr. Elliott's legacy of building research and treatment programs that help patients with neurodegenerative disorders. Dr. Hurtig has played a critical role in the founding of both the Parkinson's Disease and Movement Disorders Center and the ALS Center at Pennsylvania Hospital. He is currently the co-director of the Parkinson's Disease and Movement Disorders Center.

Throughout his career, Dr. Hurtig has participated in numerous clinical trials for Parkinson's disease (PD) drugs. His main research interest has been in the clinical-neuropathological correlation of PD and PD dementia, working in collaboration with Drs. John Trojanowski and Virginia Lee.

Dr. Kinslow praised Dr. Hurtig as "a consummate teacher of young people," adding that "we are proud and honored that he is with us at Pennsylvania Hospital."

• To learn more about opportunities for planned giving, please call Christine S. Ewan at 215-898-5341.

Benaroya Foundation Creates Challenge to Help Solve Type 1 Diabetes

Additional Gifts Urgently Needed for Match Goal

A \$1.5 million challenge grant from the Seattle-based Benaroya Foundation offers new support for the pioneering Institute for Diabetes, Obesity, and Metabolism (IDOM) at PENN Medicine.

Diabetes is considered a modern epidemic. One out of three Americans born in the year 2000 is projected to develop diabetes in his/her lifetime. Diabetes is already one of the most prevalent chronic diseases in young people nationwide.

A leader in diabetes research and patient care, PENN Medicine was recognized by *U.S. News & World Report* in 2007 as one of the top 10 medical institutions in the U.S. in Endocrinology.

IDOM is directed by world-renowned researcher Dr. Mitchell A. Lazar. His vision for IDOM is to transform approaches to a diabetes cure by creatively linking leaders in basic and clinical diabetes research. A major focus is on insulin-

producing beta cells and developing new methods to prevent rejection of islet transplants. "Success in these efforts could spare patients the need for daily insulin injections," says Dr. Lazar, "and prevent devastating complications including blindness, amputation, kidney failure, nerve damage, stroke, and heart attack."

IDOM's Type 1 Diabetes Unit is led by acclaimed diabetes expert Dr. Ali Najji, the surgical director of the Pancreas and Kidney Transplant Program at Penn.

"We want to do what we can to find a cure for Type 1 diabetes," says Larry Benaroya, W'72, of the Benaroya Foundation. "Dr. Najji's lab is one of the premier diabetes research programs in the world. Having decided to award a grant in support of Dr. Najji's lab, we felt that by offering it in the form of a challenge grant, there would be an opportunity to raise additional support for Dr. Najji's work."

In 1996, the Benaroya family made a gift through the Juvenile Diabetes Research Foundation establishing the Benaroya Diabetes Interdisciplinary Research Unit at PENN Medicine to support Dr. Najji's leading-edge work in pancreatic islet transplantation. Currently, there are only seven active centers nationwide offering islet transplantation. Many of the Type 1 diabetes subjects who have received islet transplants show near-normal blood glucose profiles.

"Our research should lead to therapies to augment beta cell mass in patients with Type 1 diabetes, with the goal of achieving normal glucose metabolism," Dr. Najji says. "It will also instruct our efforts to develop crucial surrogate beta cells for islet transplantation, bringing us closer to a cure for diabetes."

The challenge grant is ambitious and requires that PENN Medicine raise \$3 million from

Building Progress



Ralph Muller, CEO, University of Pennsylvania Health System, talks about Penn's remarkable plans for the Ruth and Raymond Perelman Center for Advanced Medicine, PENN Medicine at Rittenhouse, and beyond.

Q: With such significant construction projects both under way and being planned, this certainly is a transformational time for PENN Medicine's campus. What is the focus of current construction and renovation projects?

A: After years of planning, this summer we are launching a new era in patient care with the opening of the Ruth and Raymond Perelman Center for Advanced Medicine. At 360,000 square feet, this impressive new outpatient facility is one of Penn's largest construction projects ever, and to my mind the most exciting.

At Penn the closeness of our research and care programs is unique. For the first time, the Perelman Center will enable us to fully combine the most advanced new therapies with industry-leading standards of comfort and care in a truly state-of-the-art patient setting. It will be an invigorating, collaborative place to work — we are all really eager to see it in action.

Q: How soon will it be open to patients?
A: The phased opening begins in mid-June, when Radiation Oncology moves in and begins treating patients. This is the first stage in a detailed plan that will ultimately bring the Abramson Cancer Center, Cardiovascular Medicine, and an outpatient surgical pavilion to the Perelman Center by early 2009.

Q: Will this new construction bring new medical technology to patients?

A: One entire new facility will be dedicated to the most advanced form of radiation therapy currently available. In 2009, the new Roberts Proton Therapy Center will open as one of only six proton therapy centers nationally, and the only one on the eastern seaboard. Proton therapy targets tumor cells with unprecedented accuracy and without harming nearby healthy tissue or organs. We are projecting that 3,000 patients annually — hundreds of their children — will come to the Roberts Center for treatment.

Q: What kind of environmental standards were considered in building the Perelman Center?

A: We are very proud that the Perelman Center will be a completely sustainable, "green" building — one of the few LEED (Leadership in Energy and Environmental Design) certified healthcare buildings in the U.S. The Perelman Center will be a high-performing building in everything from water savings and energy efficiency to the overall environmental quality of the indoor space.

• These innovations are only possible because of your support. We are very thankful for your confidence as we continue to lead the way in medicine.



Translational Research Building

The Roberts Proton Therapy Center will be located directly under the Translational Research Building.

The Ruth and Raymond Perelman Center for Advanced Medicine



CREATE KNOWLEDGE PRIORITIES

Learn from Our Faculty

Podcasts from these recent faculty presentations to donors will soon be available:

Medical Alumni Weekend

- *Advances in Women's Health*
 - *Back from the Dead: Resuscitative Medicine*
 - *From Penn to the Nobel Prize*: featuring Dr. Stanley Prusiner, Penn alumnus and recipient of Nobel Prize in Physiology or Medicine
 - *Medical Education in the 21st Century*
 - *New Frontiers in Robotic Surgery*
 - *The Future of Cardiovascular Medicine*
 - *The Promise of BioMedical Informatics: Spanning the Spectrum of Basic and Clinical Research*
 - *Skin Cells into Stem Cell-Generating Embryos: What's Next in Regenerative Medicine and Is It Ethical?*
 - *When the Press Gets Medicine Wrong*: featuring Dr. Nancy Snyderman, NBC Chief Medical Editor
- Our alumni Web site is being updated. Please call the Office of Development and Alumni Relations at 215-898-5164.

Celebrating Innovations: Abramson Cancer Center Research Report and Annual Reception

- RESEARCH REPORT:
- "Clinical Integration Across Disciplines – Cancer Prevention, Diagnosis, and Cure in Philadelphia"
- FEATURED PANEL DISCUSSIONS:
- Cancer Diagnosis and Cure
 - Cancer Prevention
- Podcasts will be posted several days after the event. Please visit www.pennhealth.com/Abramson or call 215-898-8412 for more information.

Labs, Love, and... a Vision

Penn Doctors' Enduring Partnership Leads to Sight for the Blind

The collaboration that paved the way for Penn's recent announcement of a breakthrough gene therapy treatment for blindness began more than 20 years ago in a medical school lab. As a young Jean Bennett and Al Maguire — now both faculty members in the Department of Ophthalmology at the University of Pennsylvania School of Medicine — carefully tunneled through a human brain together during their first-year anatomy class, chemistry sparked between the pair.

He made her laugh, with a brainy, dry wit that left others wondering when he was telling a joke and when he was being serious. Two years later, the pair married, and they capped off their Harvard Medical School careers with a special project — the birth of their first child.

During those early years together, the two doctors dreamed big about their plans for the future. Maguire focused on building a career in ophthalmology, specializing in retinal degeneration. And Bennett, who also earned a doctorate in cell and developmental biology at the University of California at Berkeley, turned toward her background in basic science. Intrigued by animal models of these eye diseases, and early gene therapy work she'd seen in a mentor's lab at the National Institutes of Health, she and Maguire began to ask "what if?", thinking of ways to combine their respective passions. It was still a pie-in-the-sky fantasy — this notion of somehow delivering corrected genes to make the blind see — but soon, the roots of the science began to spread. "In the next couple years, it became clear that it even though it was still fantasy, it was becoming more and more realistic," Bennett says.

By 1992, the couple landed at Penn, where Maguire combined his clinical work with the genetic research they built during a year Bennett spent working in a makeshift lab filled with improvised tools at the Michigan hospital where Maguire completed a fellowship. In 2001, they hit a huge milestone in their pursuit, by leading a team that developed a gene therapy protocol to restore sight in a dog afflicted

with a severe retinal degeneration that, in humans, renders infants permanently blind.

Now, the latest breakthrough Bennett, Maguire, and their colleagues have demonstrated shows that this gene therapy can be used to safely restore vision in human subjects. They detail their success in three young adults in the *New England Journal of Medicine*.

Despite the research's huge imprint on their professional lives, the couple says they try to limit shop talk at home — the dinner table, for one, is sacred space reserved for other topics — and they also share a love of outdoor pursuits and the arts. Bennett plays the piano, and Maguire is an oil painter, and they count among their family members an adopted seeing eye dog and the tiny birds that hatch in their aviary. The couple has three children, ages 22, 21, and 18. In all things, however, their shared passion for helping the visually impaired propels them forward. The ups and downs of bench science don't deter Bennett, and Maguire continually poses new ideas of how to measure progress in their work. When it's slow-going, there's the wonder of seeing their patients cope with incredible adversity — to photograph tiny items in a museum, blow the images up and hold them close to their face to see, for instance, or behold the spectacular colors of floral blooms at the Philadelphia Flower show despite failing conventional tests for color vision — that keeps them focused on the dream that ignited so many years ago.

Jean Bennett, MD, Ph.D. is the E.M. Kirby Professor of Ophthalmology. The E.M. Kirby Foundation is a family foundation that has compassionately and prudently invested in research and faculty endowments generously at the Scheie Eye Institute or the Department of Ophthalmology for the University of Pennsylvania Health System and the University of Pennsylvania School of Medicine.

• If you would like to contribute to the Scheie Eye Institute, please call Heather Wiley Starankovic at 215-898-3652. If you would like to learn about giving opportunities for faculty support, please call Allyson Randolph at 215-898-1034.

Drs. Jean Bennett and Al Maguire



Photo credit: Duane Davis Photography

PROMOTE HEALTH

Gene Therapy Improves Vision in Patients with Congenital Retinal Disease

Patients' Vision Improved from Detecting Hand Movements to Reading Lines on Eye Chart

In a clinical trial at The Children's Hospital of Philadelphia, researchers from the University of Pennsylvania have used gene therapy to safely restore vision in three young adults with a rare form of congenital blindness. Although the patients have not achieved normal eyesight, the preliminary results set the stage for further studies of an innovative treatment for this and possibly other retinal diseases.

An international team led by the University of Pennsylvania, The Children's Hospital of Philadelphia, the Second University of Naples and the Telethon Institute of Genetics and Medicine (both in Italy), and several other American institutions reported their findings in an online article in the *New England Journal of Medicine*.

We expect improvements to be more pronounced if treatment occurs in childhood, before the disease progresses.

"This is the first gene therapy trial for a nonlethal pediatric condition," says Dr. Albert M. Maguire, associate professor, Department of Ophthalmology, University of Pennsylvania School of Medicine and a physician at The Children's Hospital of Philadelphia. Maguire, together with his wife, Jean Bennett, M.D., Ph.D., professor of Ophthalmology at Penn and senior investigator at the F.M. Kirby Center for Molecular Ophthalmology at Penn's Scheie Eye Institute, have been researching inherited retinal degenerations such as Leber congenital amaurosis (LCA), for 18 years. LCA is a group of inherited blinding diseases that damages light receptors in the retina. It usually begins stealing sight in early childhood and causes total blindness during a patient's twenties or thirties. Currently, there is no treatment for LCA.

"Patients' vision improved from detecting hand movements to reading lines on an eye chart," Dr. Maguire adds. In 2001, Drs. Bennett and Maguire were part of a team which reported successfully reversing blindness using gene therapy on dogs affected by the same naturally occurring form of congenital blindness.

The current study is sponsored by the Center for Cellular and Molecular Therapeutics

(CCMT) at The Children's Hospital of Philadelphia, directed by Dr. Katherine A. High. In 2005, she initiated a collaboration with Dr. Bennett and her group to translate their exciting animal findings into a clinical study.

The scientists used a vector, a genetically engineered adeno-associated virus, to carry a normal version of the gene, called RPE65, that is mutated in one form of LCA. Three patients, ages 19, 26, and 26, received the gene therapy via a surgical procedure performed by Maguire between October 2007 and January 2008 at The Children's Hospital of Philadelphia, where the gene vector was manufactured at the hospital's CCMT.

Starting two weeks after the injections, all three patients reported improved vision in the injected eye. "Standard vision tests showed significantly improved vision in the patients," says Dr. Alberto Auricchio, a study leader from the Telethon Institute of Genetics and Medicine and University of Naples Federico II. The researchers also reported that each injected eye became approximately three times more sensitive to light, and each was improved compared to the uninjected, previously better functioning eye.

"The current clinical trial will continue with more patients and with ongoing follow-up to monitor results," says Dr. Bennett. "We expect improvements to be more pronounced if treatment occurs in childhood, before the disease progresses."

"This result is important for the entire field of gene therapy," notes Dr. High, a past president of the American Society of Gene Therapy. "Gene transfer has been in clinical trials for over 15 years now, and although it has an excellent safety record, examples of therapeutic effect are still relatively few. The results in this study provide objective evidence of improvement in the ability to perceive light, and thus lay the groundwork for future studies in this and other retinal disorders," said High.

If you would like to contribute to the Scheie Eye Institute, please call Heather Wiley Starankovic at 215-898-3652.



Penn's Scheie Eye Institute is a world leader in research on retinal degenerations, especially age-related macular degeneration (AMD), and is consistently in the top five in the nation in funding by the National Eye Institute.

MAKING AN Impact

MAKING HISTORY THE CAMPAIGN FOR PENN Medicine

NEWS OF THE PENN MEDICINE CAMPAIGN SPRING 2008

PENN MEDICINE OFFICE OF DEVELOPMENT AND ALUMNI RELATIONS 3535 MARKET STREET, SUITE 750, PHILADELPHIA, PA 19104 215-898-0578

If you would like to make an unrestricted gift to PENN Medicine, please mail a check payable to the Trustees of the University of Pennsylvania to the address above.

PREPARE LEADERS PRIORITIES

- Graduate student financial aid: The campaign will give us the resources to attract the best and most diverse students, regardless of their financial resources.
- Curricular innovations: The campaign will support curricular innovations including new technologies and new approaches to enhance learning.
- Enhancing facilities: The campaign will create facilities to support teamwork, simulations, and other new aspects of the curriculum, as well as a new medical training facility and an improved medical education learning environment.

Meet Dr. Martin S. Kanovsky

MAAC's New Co-President



Dr. Martin Kanovsky and Ellen Teller

Last spring, Dr. Martin S. Kanovsky, M'78, INT'79, RES'81, FEL'83, became the newest co-president of the Medical Alumni Advisory Council (MAAC). MAAC is the volunteer leadership group for PENN Medicine's Office of Development and Alumni Relations. "I am grateful for the educational opportunities and cardiology training I received at Penn," he says. "This is my way of paying something back to the next generation of medical professionals."

As co-president for his 30th reunion this May, Dr. Kanovsky has worked hard for the past 18 months to help the Reunion Committee surpass its fundraising goals. "I have enjoyed talking with so many of my classmates, and I look forward to all

of us gathering on campus to reunite," he says. He hopes to continue this success and visit activity as MAAC co-president, "for the next 30 years of engagement with PENN Medicine."

Dr. Kanovsky enjoys interacting with students through the HOST Program, and encourages others to participate. In 2003, he and his wife, Ellen Teller, established the Rose and Hershel Kanovsky Prize to honor his parents. In 2004, he was recognized for his dedication to PENN Medicine with the Alumni Service Award.

A cardiologist in private practice in Chevy Chase, Dr. Kanovsky counts many notable Washingtonians among his patients. He and his wife Ellen live in Potomac, Maryland, with their three children.

If you would like to become involved in alumni or reunion activities, please call Vanessa Marinari at 215-898-9692.

Tomorrow's Classrooms for Tomorrow's Medicine:

Penn's New Medical Education Space

By 2012, campaign gifts will help us transform Penn's School of Medicine facilities into a world-class home for medical education and a hub for activities at the center of our medical campus.

"To prepare students to be tomorrow's leaders requires the School of Medicine to develop a learning environment that better equips them to be physicians in the 21st century," says Dr. Gail Morrison, vice dean for education.

Behind a striking façade, dynamic new spaces will support the next generation of education excellence. A state-of-the-art information commons will allow students to tap into rapidly-changing medical knowledge, while 30 new classrooms, seminar rooms, and study areas/lounges will create additional environments geared toward small-group teaching and learning.

"This new medical education space, located in the center of the PENN Medicine campus, will encourage collaborative learning among students and faculty," says Morrison. "It will be a fitting entryway to our School and to the medical profession of the 21st century."

The project relies strongly on philanthropic support. To learn more, please call 215-898-5164.



The School of Medicine's New Front Door viewed from Hamilton Walk

The Jordan Scholarship Challenge

Supporting the Medical Leaders of Tomorrow



"The School of Medicine attracts young people who are really enthusiastic and idealistic about helping people — more so, I sense, than a lot of other medical schools," explains School of Medicine Campaign Chair Dr. Henry Jordan, M'62, RES'67.

"Many of them come already wanting to work with underserved patients, and then others are exposed to this through our global and community health programs and decide it's what they want to do."

"But it's really hard to choose that kind of career path if you have huge educational loans to pay back. So when we give money for scholarships, often we're ultimately helping patients who might not have had access to high-quality care."

Jordan and his wife Barbara have made a generous and innovative challenge gift to help meet the campaign goal of raising \$100 million for scholarships. The gift will establish the John Morgan Scholars program, named for the founder and first professor of medicine at Penn's medical school. Fund contributions will be pooled, so that they can be used most rapidly. Gifts to both the pooled fund and to establish named scholarships will be matched.

Endowed in perpetuity, the program will ensure that the School of Medicine continues to attract the best and brightest students. Perhaps most importantly, these scholarships will allow students to make career choices based on interests, not financial constraints.

Supporting a Penn medical student today truly has the ability to transform the medicine of tomorrow. If you would like to learn more about scholarship giving, please call 215-898-5164.

Abramson Cancer Center Donor Launches International Oncology Exchange Program

Fred Miller, who just celebrated his 60th birthday, found the medical care to win his battle with colon cancer at Penn's Abramson Cancer Center. To advance the work that saved his life more than five years ago, Miller started Florida Fish for Life, a popular annual sailfish tournament that raises thousands of dollars for colorectal/gastrointestinal cancer research. Now Miller is working to improve the chances of patients around the globe by funding the new International Visiting Oncology Scholars program.

Led by Dr. Weijing Sun, the director of the gastrointestinal oncology program and a specialist in medical oncology on the Abramson Cancer Center's faculty, the program will initially focus on China.

Mr. Miller's philanthropy and Dr. Sun's strong connections with academic medical centers across China enabled four prominent Chinese oncologists to come to Penn's Abramson Cancer Center as visiting scholars for three months this academic year. The exchange program's objective is to improve the research and treatment skills of visiting international oncologists, to share and receive new knowledge, and to focus on the treatment and development of new drugs for gastrointestinal cancers.



Fred Miller, Dr. Weijing Sun, and Judy Miller join forces for the international scholars program.

Two of the visiting oncologists — Baoai Xing, MD, PhD, a surgical oncologist and director of the pancreatic cancer program, and Dr. Xiaodong Zhang, a specialist in gastrointestinal cancer and the program director — come from the School of Oncology at Peking (Beijing) University. Dr. Xiaojia Wang specializes in breast cancer treatment and clinical research at the Zhejiang Cancer Center in Hangzhou, a metropolitan area of four million people southeast of Shanghai, and Dr. Liu Wei is director of Chemotherapy at Hebei University in northeast China.

For more information on how you can contribute to this or other international outreach programs, please call 215-573-4028.

MAKING AN Impact

Penn Announces Breakthrough in Blindness Treatment: see inside

NEWS OF THE PENN MEDICINE CAMPAIGN SPRING 2008

MAKING HISTORY THE CAMPAIGN FOR PENN Medicine

Propel Discovery: p1 • Promote Health: p2 • Create Knowledge: p3 • Prepare Leaders: p4

Leading the Next Medical Revolution

Arthur H. Rubenstein, MBCh Executive Vice President, University of Pennsylvania for the Health System Dean of the School of Medicine



What can \$1 billion in philanthropy accomplish? At PENN Medicine, every contribution toward this campaign goal fuels our leadership in a medical revolution already underway.

The great advances of our times, such as personalized medicine and genetically based therapies, depend on unprecedented integration of patient care and emerging research. In our plans for our Translational Research Building, for instance, the new geography of medicine becomes clear. Bench scientists and clinical researchers will share space, working hand in hand to bring highly customized treatments to patients whose medical challenges ask us to push out the boundaries of medical progress.

In the same complex, those patients will find care in the Ruth and Raymond Perelman Center for Advanced Medicine. Their physical connection to teams of researchers, just down the hall and around the corner, will reinforce the integration at the heart of translational medicine. Ruth and Raymond Perelman took us a giant step toward our vision for the future with their lead gift of support for this model of integrated care.

With campaign support, we will fill these facilities with the faculty leaders who can redraw the medical map and educate the next generation of scientists and physicians. New resources for scholarships and fellowships will bring in the students whose imaginations will take medicine into territories we cannot even foresee today.

The capacity of PENN Medicine to unlock the promise of medicine and alleviate suffering has never been greater. We invite you to join us in ensuring that Penn will have the resources to lead this next revolution, creating a healthier world.



Penn's Translational Research Building will be one of the first anywhere to be physically integrated with patient care facilities.

CAMPAIGN UPDATES

Overall Campaign Progress

\$472.0 Million \$1 Billion

Gifts and Pledges: \$472,023,818 Receipts: \$436,176,734

Progress Towards Campaign Core Goals

\$282.2 Propel Discovery: \$480 Million
\$110.4 Promote Health: \$200 Million
\$38.2 Create Knowledge: \$120 Million
\$41.2 Prepare Leaders: \$200 Million

Data as of April 30, 2008

Thanks to Donor Support Promising Ovarian Cancer Vaccine Trial Begins at Abramson Cancer Center

Hope is on the horizon for women at risk of developing ovarian cancer. Ground-breaking research from the Abramson Cancer Center's George Coukos, MD, PhD, offers real progress toward an unprecedented goal: a vaccine that could prevent ovarian cancer.

Early detection and innovative treatments are high priorities for ovarian cancer patients. The leading cause of death among female reproductive cancers, ovarian cancer often goes undiscovered until its final and most difficult to treat stages.

In the Coukos lab, physicians, medical students, researchers, and many donors have teamed up to explore the immune system's response to the cancer.

Dr. Coukos has shown that the presence of a particular type of immune cell, tumor-infiltrating lymphocytes, predicts the length of remission after chemotherapy and the overall survival of ovarian cancer patients. This dramatic finding suggests that a vaccine might induce an anti-tumor response in women and prevent the development of the cancer.

In January, a clinical trial was started to test the new, preventive vaccine in patients with ovarian cancer who have completed chemotherapy, have no evidence of disease, and are at risk for tumor recurrence. Donors from around the country and at every level have supported this trial, including one who has raised nearly \$2 million for the lab's work through personal and external resources. So far, two patients who have received the vaccine have responded well. Such progress would not be possible without extraordinary donor support, which can remove the significant obstacles to launching new research.

Dr. Coukos's work exemplifies PENN Medicine's strength in translational



Dr. George Coukos is leading the development of a vaccine to prevent ovarian cancer, the most deadly female reproductive cancer.

medicine, in which research and practice are aligned to put new ideas to work quickly. "The Center is the only one of its kind in the region," Dr. Coukos says. "Our team now comprises a large basic and translational research group, as well as physicians dedicated to moving concepts from our laboratories into the clinic."

The support of a broad-based donor community — from committed individuals to generous national foundations — promotes discovery in the Coukos lab. The immune therapies they explore today may some day become the standard prevention and treatment regimens of ovarian cancer for thousands of women. With additional support, Dr. Coukos hopes to meet the goal of having an off-the-shelf vaccine within five years.

The Abramson Cancer Center has one of the nation's leading programs for the diagnosis and treatment of gynecologic cancers. If you would like to support this exciting research to develop a preventive and therapeutic ovarian cancer vaccine, please call 215-573-4028.

PROPEL DISCOVERY PRIORITIES

- Creating new facilities: We will create a new research building to support collaboration between research and clinical practice.
- Expanding interdisciplinary institutes and centers: We will support and expand the stature and impact of key institutes and centers addressing pressing medical needs, including cancer, cardiovascular disease, diabetes and obesity, neurological disorders, and translational medicine.
- Supporting basic research: We will seed innovative basic research that is the foundation for our future progress.