

 Thomas Jefferson University



imagine a time when students in medicine, nursing, occupational therapy, pharmacy and research work in integrated teams – learning how their combined intellect and skills will translate to exceptional patient care and leading-edge research.

At Jefferson, that time is now.

Mission

Thomas Jefferson University is dedicated to the health sciences. We are committed to:

- Educating professionals in a variety of disciplines who will form and lead the integrated healthcare delivery and research teams of tomorrow
- Discovering new knowledge that will define the future of clinical care through investigation from the laboratory to the bedside, and into the community
- Setting the standard for quality, compassionate and efficient patient care for our community and for the nation

We accomplish our mission in partnership with Thomas Jefferson University Hospitals, our education and clinical care affiliate.

Vision

- To be among the premier educators of health-care practitioners in the nation
- To be a leading innovator in the provision of compassionate clinical care
- To be a major center for patient-oriented research and clinical trials
- To be a knowledge leader in selected areas of basic research



On the Cover:

Christine Arenson, MD, Associate Professor and Director, Division of Geriatric Medicine, Department of Family and Community Medicine, and Molly Rose, FNP, PhD, Professor, School of Nursing (not pictured), have been instrumental in establishing the Jefferson InterProfessional Education Center. One of only a few nationwide, the Center focuses on improving patient care through facilitation, implementation and evaluation of a team-based education curriculum for Jefferson students.

A message from Robert L. Barchi and Brian G. Harrison

Thomas Jefferson University has a legacy of being at the forefront of healthcare education that began in 1824 with our medical school founder, George McClellan, MD. He believed the best approach to education was supervised student participation in patient care. At the time, this was considered revolutionary.

Nearly two centuries later, we're still redefining healthcare education and research. We can – and do – provide an environment where faculty, students and researchers learn and effect changes that make a difference not only in the lives of patients, but for the good of society.

As Jefferson looks ahead, we see opportunity to do even more. We recently established the Jefferson School of Health Policy and Population Health, founded on the belief that providers must understand global healthcare to improve the health of populations here. In 2009, students will learn about the complexities of population health, how to set health policy standards, and manage healthcare quality, safety and chronic care.

Following our strategic plan that identified the need for more facilities to educate pharmacists, we opened the School of Pharmacy. Our first class of 75 was chosen from more than 900 applicants. Students now participate in a program that leverages the benefits of an academic organization offering a full complement of healthcare education.

To address the growing need for multidisciplinary patient care, Jefferson continues to develop curricula that foster a team approach to treatment. We lead the way with innovative instruction through the Jefferson InterProfessional Education Center. *Jefferson Health Mentors* immerses all students in a two-year program working with the chronically ill, while our Clinical Skills and Simulation Center uses state-of-the-art technology to create realistic medical training simulations for students.

Jefferson's commitment to advancing research that translates to better quality of life is also a hallmark of our institution. Recent exciting discoveries in cardiology, cancer and neuroscience promise to change the course of treatment as well as the manner in which certain diseases are viewed.

From education, to patient care and research, we know that the combined intellect of the healthcare leaders of tomorrow will translate to exceptional treatment and breakthrough discoveries. At Jefferson, we're on the cusp of transforming the way patient care is delivered.



Robert L. Barchi, MD, PhD
President



Brian G. Harrison
Chair, Board of Trustees



“Teaching students to see and understand the complexities of a patient’s entire health history – and not just treat the acute episode as a solitary event – is an important building block to providing comprehensive care.”

Michael Vergare, MD
Interim Dean
Jefferson Medical College

Learning and Healing as a Team

Providing care to patients with chronic conditions requires a coordinated approach – with a team of healthcare professionals making critical decisions together. Recognizing that patients often need care from many different specialists, Thomas Jefferson University has created the Jefferson Inter-Professional Education Center (JCIPE). Its goal is to develop a practice model promoting synergies among healthcare providers that can be applied in the real world as students begin their medical careers. This model will transform healthcare delivery.

One of only a few centers nationwide, JCIPE is co-directed by Christine Arenson, MD, Director, Division of Geriatric Medicine, Department of Family and Community Medicine, and Molly Rose, FNP, PhD, Professor in the School of Nursing. The Center focuses on improving patient care through facilitation, implementation and evaluation of a team-based curriculum. Students in medicine, nursing, physical and occupational therapy, family and couple therapy and pharmacy learn together in an environment that fosters interaction and respect for each other’s disciplines and specialized skills.

An important component of this team education is a two-year program, called *Jefferson Health Mentors*, where multidisciplinary teams of students are mentored by patients with chronic illnesses. Together, students from JMC and the schools of Nursing, Health Professions and Pharmacy work

to gain a comprehensive view of the patient’s treatment challenges. The shared learning contributes to a greater appreciation of the value this integrated treatment approach has to the patient.

The real-life patient experience students receive is enhanced by the high-tech training delivered through the university’s Clinical Skills and Simulation Center. Here, teams use simulated patient scenarios – from acute episodes such as heart attacks, to labor and delivery – to experience medical events that are extremely realistic.

Co-directed by Dale Berg, MD, and Kate Berg, MD, the Center provides replicas of operating and emergency rooms and ICUs and hospital rooms. Students use simulation manikins and interact with patient actors to enhance the realism of medical events. The faculty then translates what’s happening in these labs to what is likely to occur at the patient’s bedside. These scenarios offer students an opportunity to learn and repeat procedures – even for rarely experienced events – so that when confronted with real patient events, they are already highly experienced.

When interdisciplinary education is combined with high-tech simulations and patient mentoring, the management of chronic illness and acute episodes becomes very real for Jefferson students. This approach to medical care offers our future healthcare professionals an education unmatched in the region and unsurpassed in the nation.

Accomplishments

• Jefferson and the Foundation for Advancement of International Medical Education and Research will jointly support projects in resource-limited countries that focus on faculty development, continuing medical education and research in medical education.

• Enrollment in Jefferson’s MSN degree program has experienced a 130% jump since 2004; our BSN degree program enrollment increased by nearly 50%.

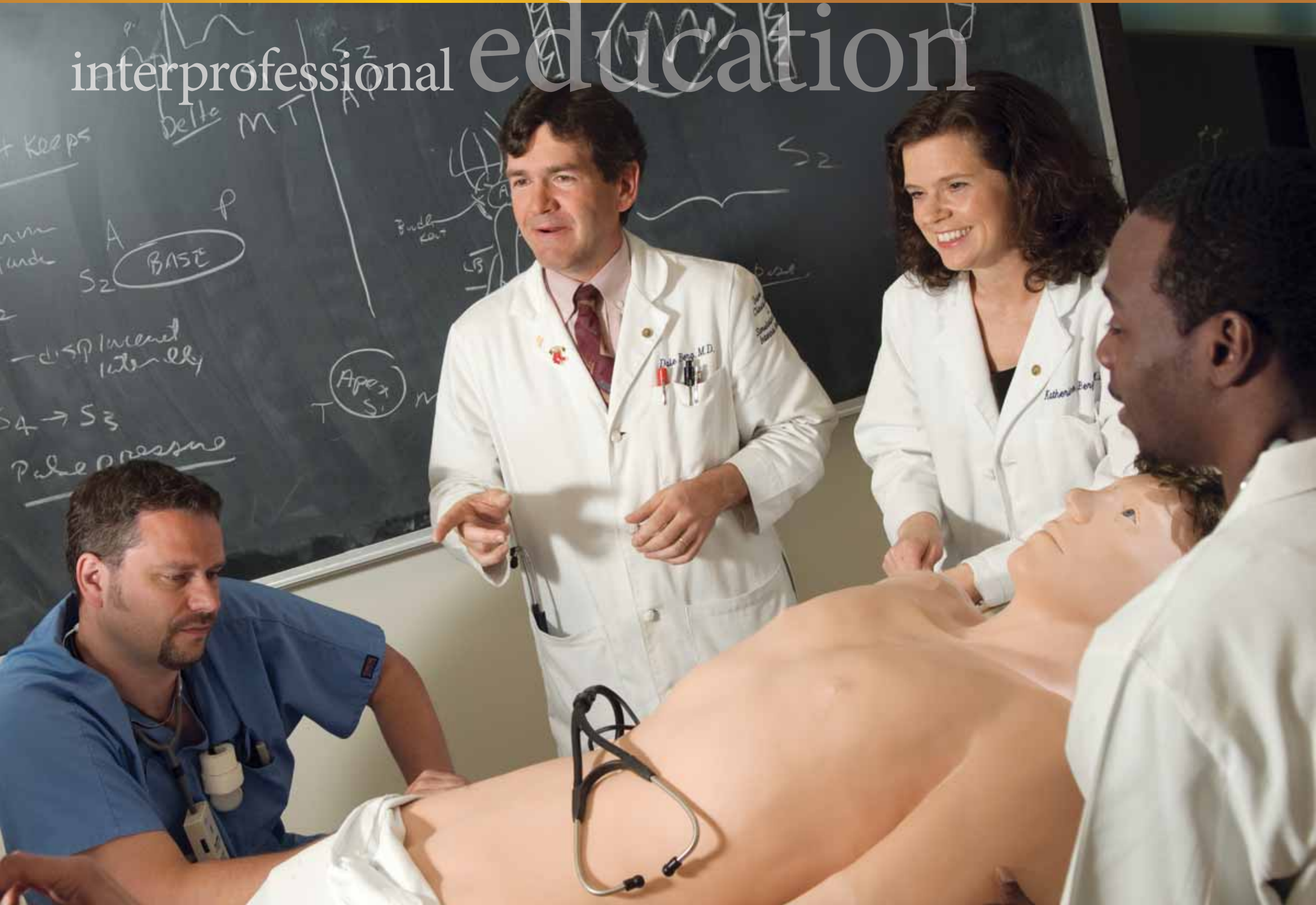
• Jefferson received \$7.5 million from the estate of alumnus Dr. Robert and Dorothy Rector to be used for the university’s educational mission and to support our Clinical Skills Center where interdisciplinary learning is the standard.

• The Department of Family and Community Medicine received a three-year grant from the Bureau of Health Professions. Jefferson will expand its rural Physician Shortage Program to Delaware, where students will be committed to practicing medicine after they graduate.



At the Dr. and Mrs. Robert D. Rector Clinical Skills Center multidisciplinary student teams work together in state-of-the-art simulation labs to perform clinical procedures such as vital signs, single-lead electrocardiogram, defibrillation, intubation, vein puncture and urinary catheterization. Led by the Center's Co-Directors, Dale Berg, MD, and Katherine Berg, MD, (pictured here) students are introduced to real-world scenarios, allowing them to practice and perfect their techniques in a safe, hands-on environment.

interprofessional education



“The School of Pharmacy develops programs that redefine the pharmacist’s role in healthcare and complement the university’s curricula which are designed to support collaborative healthcare teams.”

Rebecca Finley, PharmD, MS
Dean, Jefferson School of Pharmacy

A Prescription for Change

Inspiring students to think beyond the traditional boundaries of pharmacy and their roles as pharmacists are important goals of the School of Pharmacy, opened in September of 2008.

As part of the Jefferson College of Health Professions, the School of Pharmacy leverages the benefits of being part of an integrated academic organization with a full complement of healthcare education. Students are immersed in a system that fosters interprofessional collaboration among many healthcare disciplines and allows them to train alongside medical, nursing, physical and occupational therapy students.

Rebecca Finley, PharmD, MS, and Dean of the Jefferson School of Pharmacy, has assembled a faculty whose shared enthusiasm for making real-life connections is key to teaching pharmacy students the important

and evolving role they will play in delivering healthcare. Work partnerships with retail and hospital pharmacies give students the opportunity to take classroom lessons out into the community from the very first week of school.

The first class of 75 students, chosen from a pool of more than 900 applicants, represents individuals from 26 states—a testament to Jefferson’s strategic plan that uncovered the pressing need for more facilities to educate the pharmacists of tomorrow.

For Rebecca Finley, PharmD, MS, and Dean, Jefferson School of Pharmacy, one measure of success is the numbers. More than 900 applicants vied for 75 slots in the School of Pharmacy, which opened its doors to the first class this past September.



Accomplishments

- The Department of Radiologic Sciences received accreditation of its MRI and Nuclear Medicine programs by their Joint Review Committees. The programs were recognized for outstanding preparation of professionals in the field. Jefferson is among only a few in the Northeast to hold this accreditation.

- The Center for Applied Research on Aging and Health received the Rosalynn Carter Institute for Caregiving/Johnson & Johnson Award. The grant supports clinician training to assess the needs of caregivers and better manage care for dementia patients.



Health Matters

Complexities in managing population health and its corresponding policies have created a demand for leadership that is prepared to take on new roles. Many challenges, such as aging populations, chronic diseases and disparities in treatment access, have taxed the healthcare system. There is an imminent need to improve the system so it can support research, test interventions, set standards and deliver care for the greater good.

Jefferson is committed to redefining healthcare education and also has broadened its offerings to keep pace with the changing landscape by establishing the School of Health Policy and Population Health (JSHPPH). Under the direction of David B. Nash, MD, MBA, and with support from Richard Wender, MD, JSHPPH will take the public health programs already offered at the Jefferson College of Graduate Studies to an even higher level – offering new certificate and master’s degree programs in health policy, healthcare quality and safety and chronic care management.

The health of everyone in our society matters. Thomas Jefferson University is uniquely positioned through the JSHPPH to educate the healthcare leaders of tomorrow who will play critical roles in reducing inequalities in health between population groups.

“Students will learn about the economic, social, environmental and biological factors that influence the health of populations. Then, they can be part of the solution, by developing policy approaches that improve health outcomes among all groups.”

David B. Nash, MD, MBA

Dean, Jefferson School of Health Policy and Population Health

Accomplishments

- The Jefferson School of Health Policy and Population Health received a grant to develop the Doris N. Grandon Center for Health Economics and Outcomes Research. The new space includes facilities to support important research in this area.
- Thomas Jefferson University and Widener School of Law now offer two dual degree programs – Juris Doctor/Master of Public Health (JD/MPH) and Master of Jurisprudence/Master of Public Health (MJ/MPH) – the only programs of their kind in the Delaware Valley.

David B. Nash, MD, MBA, (right) Dean, Jefferson School of Health Policy and Population Health, pictured here with Richard Wender, MD, Chair of the Department of Family and Community Medicine and of the new School's Advisory Committee. Through the School, Drs. Nash, Wender and their teams will prepare leaders to develop and implement policies and systems focused on improving healthcare for all populations of society.

“With \$78.2 million in NCI grants, we’re supporting 73 cancer-related studies at the Kimmel Cancer Center.”

Richard G. Pestell, MD, PhD, MBBS, FRACP

Director, Kimmel Cancer Center at Jefferson, Associate Dean, Cancer Programs, Jefferson Medical College

Stemming the Tide of Cancer

After a rigorous, competitive review process by the National Cancer Institute (NCI), Jefferson’s Kimmel Cancer Center (KCC) has, once again, been awarded the prestigious title of an *NCI-Designated Cancer Center*. Since 1995, KCC has been continuously recognized by NCI as a center of scientific excellence for the treatment of cancer and cancer-related illnesses.

An elite group of sixty cancer centers nationwide are awarded NCI designation. During the review process, KCC received accolades for its high level of education, research and clinical care standards, as well as recognition for its tremendous growth in faculty, grant awards and clinical trials.

Under the leadership of Richard G. Pestell, MD, Director of the Kimmel Cancer Center, KCC has secured significant, new NCI funding and will retain this designation through 2013. As part of Jefferson’s strategic plan, the Center plans to apply for Comprehensive Cancer Center status, which would place KCC in an even more select group of cancer facilities.

Through the recent establishment of the *Jefferson Stem Cell Biology and Regenerative Medicine Center*, Thomas Jefferson University and KCC have further supported their mission to discover new treatments that will redefine the future of clinical care. Under the direction of Michael P. Lisanti, MD, PhD, Professor of Cancer Biology and the Margaret Q. Landenberger

Professor of Breast Cancer Research, researchers are studying the biology, behavior and medical uses of adult stem cells to treat cancer and other diseases.

One area of concentration for the Center is to understand the function of cancer stem cells. Investigators are studying ways to identify and develop new biomarkers related to cancer stem cells. Their predictive values will lead to better, targeted therapies for cancer.

Clinical pharmacologist Scott A. Waldman, MD, PhD, Professor and Chair of Pharmacology and Experimental Therapeutics is leading the way in other areas of cancer research. Through his research on a vaccine for colorectal cancer, Dr. Waldman has found a way to immunize mice against the development of metastatic disease, or the spread of cancer from one part of the body to another. Immunized first with an intestinal protein called guanylyl cyclase C (GCC) and then injected with colon cancer cells, the animals developed 90 percent fewer liver and 75 percent fewer lung metastases. In the future, immunizing individuals with the protein GCC could help fight colorectal cancer and other cancers that originate and metastasize from mucosa.

Accomplishments

- Investigators at Jefferson’s Kimmel Cancer Center have found that the gene USP22 can predict which tumors are likely to be aggressive. The studies, led by Steven McMahon, PhD, Associate Professor of Cancer Biology, have shown this gene to be a potential target for new anti-cancer drugs.

- Neal Flomenberg, MD, was appointed Chair for the Department of Medical Oncology. He is the Director of the Hematologic Malignancies and Hematopoietic Stem Cell Transplant programs and Professor of Medical Oncology, Microbiology and Immunology at Jefferson Medical College.

- Mathew Thakur, PhD, Professor of Radiology and Radiation Oncology/Nuclear Medicine has been awarded the 2008 *Cassen Prize* for outstanding achievements in promoting the development and growth of Nuclear Medicine.

- Researcher Marja Nevalainen, MD, PhD, Associate Professor of Cancer Biology, and her colleagues have shown that by blocking signaling protein Stat3, they can prevent prostate cancer cells from spreading. Future studies will examine Stat3 as a target for therapies aimed at keeping prostate cancer at bay.



Richard G. Pestell, MD, PhD, MBBS, FRACP, Director, Kimmel Cancer Center at Jefferson, Michael P. Lisanti, MD, PhD, Professor, Department of Cancer Biology and Scott A. Waldman, MD, PhD, Professor and Chair of Pharmacology and Experimental Therapeutics have more than seven decades of combined expertise in the diagnosis and treatment of various cancers. With their contributions as well as those from teams of scientists and healthcare providers, Thomas Jefferson University Hospitals is now ranked 28th in the nation for cancer care by *U.S. News & World Report*.

unparalleled expertise



“This record-setting NIH grant will fund research across institutions. We can pool decades of knowledge from our organizations to study cardiac injury that leads to heart failure, and develop novel therapeutic strategies to treat a failing heart.”

Walter J. Koch, PhD
W.W. Smith Professor of Medicine
and Director of the Center for
Translational Medicine

Getting to the Heart of It

The path to scientific discovery starts with a desire for knowledge and the support of leaders who share a passion for getting to the heart of the matter – finding answers that will help cure diseases and save lives. Through a five-year, \$11.6 million dollar grant from the National Heart, Lung and Blood Institute (NHLBI), cardiovascular disease researchers at Jefferson and other area institutions are on a quest to do just that.

As testimony to its reputation as an exceptional research institution, Jefferson Medical College has been awarded one of the largest research grants in the history of the institution. Under the leadership of Walter J. Koch, PhD, the W.W. Smith Professor of Medicine and the Director of the Center for Translational Medicine, this multi-center grant is funding four projects to identify new molecular pathways and target molecules that can repair a failing heart.

One of these projects is led by Primary Investigator Thomas G. Force, MD, the James C. Wilson Professor of Medicine. Known for his earlier research revealing that a certain type of cancer-fighting drug called a tyrosine kinase inhibitor (TKI) can cause heart failure, Dr. Force has since discovered that

this drug may actually damage heart stem cells and prevent repair. With this grant Dr. Force will continue to lead a group that will test the tyrosine kinase inhibitor drugs to better understand how they affect cardiac stem cells.

Another group led by Arthur Feldman, MD, PhD, the Magee Professor and Chair of Medicine at Jefferson Medical College, will focus on the role of adenosine receptors in the heart. While much is known about their role in protecting the heart when it's deprived of oxygen during a heart attack, little is known about what part they play in heart failure or in healing the heart after injury.

Advancing another area of cardiovascular research through a separate NHLBI grant is Paul F. Bray, MD, the Thomas Drake Martinez Cardeza Professor of Medicine. He and colleagues from 40 centers nationwide have found that women with no history of heart disease do not have an elevated risk of cardiac problems if they receive hormone replacement therapy. Dr. Bray and his colleagues have found that a simple blood test measuring cholesterol levels would give physicians a good basis to determine whether a post-menopausal patient is a candidate for hormone therapy.

Accomplishments

- A study of 5,000 heart attack patients found that a partially purified extract of Chinese red yeast rice reduced repeat heart attacks by 45 percent and revascularization and mortality by one-third. Findings were reported by corresponding author David M. Capuzzi, MD, PhD, Director of the Cardiovascular Disease Prevention, Myrna Brind Center of Integrative Medicine.

- Arthur Feldman, MD, PhD, the Magee Professor and Chair of Medicine was selected as Editor-in-Chief of the new journal *Clinical and Translational Science*. He will work in partnership with Deputy Editor Scott A. Waldman, MD, PhD, Professor and Chair of Pharmacology and Experimental Therapeutics.



- Scientists have found that the protein S100A1 may have protective effects for blood pressure. Assistant Professor of Medicine, Patrick Most, MD, discovered that by lowering S100A1 in an animal's blood vessels, blood pressure could be increased. This suggests the protein could be a therapeutic target for blood pressure treatment.

With an \$11.6 million NIH Program Project Grant, scientists are studying the molecular mechanisms of cardiac injury that lead to heart failure. Funding for the project, led by Principal Investigator, Walter J. Koch, PhD, Director, Center for Translational Medicine, supports four core areas: administration, surgical, molecular and gene therapy, as well as four main laboratory facilities. Pictured with Dr. Koch (left) are the leaders of these facilities, Patrick Most, MD, PhD, Erhe Gao, MD, PhD, Andrea Eckhart, PhD, and Joseph Rabinowitz, PhD.

exceptional research



“The research we’re doing in Multiple Sclerosis can potentially change the course of this devastating disease, which affects nearly half-a-million Americans.”

A.M. Rostami, MD, PhD
Professor and Chair
Department of Neurology

Unlocking the Secrets of Our Nerve Center

Professor and Chair of the Department of Neurology, A.M. Rostami, MD, PhD, and his team have developed models with a Multiple Sclerosis-like disease to study their response to the protein interleukin-27 (IL-27). Investigators have found that this protein helped to block or reverse MS symptoms, suggesting that one day it may be an important addition to current therapy for millions suffering with MS.

This study revealed that IL-27 functions in two important ways: it suppresses an inflammatory immune response, decreasing the damage to healthy brain and nerve cells, and it increases the production of an anti-inflammatory protein that suppresses the uncontrolled symptoms that many MS sufferers experience. For Dr. Rostami, these findings provide the evidence needed to study human blood samples, in the hopes that similar results will support the successful therapeutic application of IL-27.

In his journey to help patients overcome debilitating migraines, Stephen D. Silberstein, MD, Professor of Neurology and Director of the Jefferson Headache Center, is leading two key clinical trials designed to test the effectiveness of pain relief for both episodic and chronic migraines. The Headache Center – one of the few academic headache centers in the country – offers unique, high-level tertiary care.

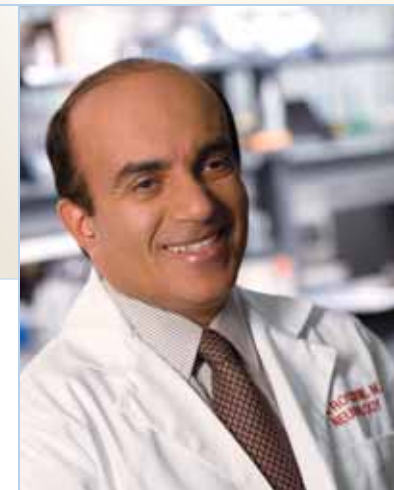
Dr. Silberstein is currently testing an implantable Occipital Nerve Stimulator with an external controller that can be adjusted by the patient to manage headache pain. In a second trial, he presented promising results demonstrating that magnetic stimulation by an external device held at the back of the head, can “turn off” the pain for people with mild to moderate migraines. For more than 28 million Americans who suffer migraines, Dr. Silberstein’s research may eventually offer relief to those who don’t respond to conventional treatments.

A new \$3.5 million grant from the National Eye Institute has been awarded to the Farber Institute for Neurosciences to support important research in age-related macular degeneration (AMD), the leading cause of blindness in older persons in the U.S. Under the leadership of Barry W. Rovner, MD, Professor of Psychiatry and Neurology, and Director of the Center for Clinical Alzheimer’s Disease Research, the grant will fund community-based clinical trials aimed at preventing depression and improving vision function in patients with AMD. The investigations will test the effectiveness of rehabilitative intervention by an occupational therapist and a low-vision optometrist to reduce the occurrence of depression in those with the disease.

Accomplishments

- Jefferson has established a Parkinson’s disease and Movement Disorders Center with the addition of two specialists in this area. Within the past three years, Neurology has built a specialty clinical practice numbering over one thousand patients.

- Jefferson is one of the busiest neurovascular/endovascular neurosurgery practices nationwide. It’s also among the first in the U.S. to explore a new FDA-approved liquid system treatment for patients with wide-neck brain aneurysms. If effective, the treatment could be an alternative for aneurysms not always responsive to surgical options.



- More than 70 extensive clinical trials are being conducted in epilepsy, headache, stroke, Multiple Sclerosis, Neuroimmunology and Neurogenetics.

Stephen D. Silberstein, MD, Professor of Neurology and Director, Jefferson Headache Center, uses a Transcranial Doppler (TCD) to measure levels of nitric oxide and endothelin-1 in migraine patients. Monitoring blood flow through vessels in the brain during a migraine has yielded important data on what triggers these attacks and why they persist.



Barry W. Rovner, MD, Professor of Psychiatry and Neurology, discusses neovascular age-related macular degeneration with a patient. Dr. Rovner received a \$3.5 million grant from the National Eye Institute to support clinical trials aimed at preventing depression and improving vision function in patients with age-related macular degeneration.



advanced methodologies

“Creating the Vaccine Center is a natural progression for us. With a critical mass of expertise in one place and the infrastructure to harness this knowledge, we will be able to fast-track the pioneering vaccine work we’re doing.”

Matthias Schnell, PhD
Professor of Microbiology and Immunology, Director, Jefferson Vaccine Center

A Center of Strength

After decades of research from experts in fields ranging from melanoma and colon cancer to HIV and rabies, vaccine researchers at Thomas Jefferson University have established the *Jefferson Vaccine Center*. This new Center creates the infrastructure needed to house all of the university’s vaccine research and clinical efforts, while fostering new collaborations and innovation.

Under the leadership of Matthias Schnell, PhD, Professor of Microbiology and Immunology, along with Associate Director Laurence Eisenlohr, VMD, PhD, Professor of Microbiology and Immunology, the new Center is the nucleus of immunology research expertise. More than 40 faculty members are working alongside medical and post-doctoral students to study and explore new methods for creating vaccines to prevent the spread of such virulent organisms and diseases as botulism, anthrax, Alzheimer’s, SARS, and ovarian cancer.

Collaboration and information sharing among vaccine experts is especially crucial in their journey to develop treatments that prevent the spread of infectious diseases. Different skill sets and expertise must be combined to uncover new methodologies for vaccine development. The Center provides

the framework needed to help scientists develop new treatments while investigating new applications for existing vaccines.

One great example is the work of Robert J. Winn, MD, Medical Director of Mazzone Family and Community Medicine, who is conducting a phase III study of a vaccine that is currently approved to protect women against cervical cancer and four types of HPV. This clinical trial is studying the efficacy of the drug in the prevention of anal dysplasia in gay and bisexual men, a precursor to anal cancer. Should the study prove its effectiveness, FDA approval will be sought for use of this HPV vaccine in men to prevent the same strains of HPV as in women.

The Jefferson Vaccine Center also supports the work of renowned vaccine pioneer, Hilary Koprowski, MD, Professor of Cancer Biology, who is championing the development of plant-based vaccines. This type of immunization may someday provide an inexpensive, widely-accessible means of protection worldwide.

The huge unmet need for new and better vaccines continues to drive Jefferson scientists in their search for new ways to prevent disease and improve the course of human health.

Accomplishments

- David Berd, MD, and Michael Mastrangelo, MD, both professors of Medical Oncology, have developed melanoma vaccines. Dr. Berd’s vaccine, created from a patient’s own tumor cells, has had well-chronicled successes and is currently in clinical testing.



- World-renowned virologist and immunologist Hilary Koprowski, MD, Professor of Cancer Biology, was honored by his native country, Poland, with the renaming of the multimillion dollar Gdansk Science and Technology Park to the Hilary Koprowski Science and Technology Park.

- Craig Hooper, PhD, Associate Professor of Cancer Biology, is studying the immunology of rabies infection, particularly in the brain, while Bernhard Dietzschold, DVM, Professor of Microbiology and Immunology, is working toward devising a new and improved rabies vaccine in wildlife. Both may reduce deaths, especially in poorer nations.

Matthias Schnell, PhD, Professor of Microbiology and Immunology and Director of Jefferson's newly-established Vaccine Center, reviews the process of separating cells for analysis with fourth-year students Celestine Wanjalla, MD/PhD program, (front) and Elizabeth Faul, PhD program.

leading-edge technology



Patient Care

“A patient was too upset after an appointment to accurately recall what had occurred. The EMR allowed his family physician to instantly read the specialist’s notes and fully understand the patient’s situation.”

George Valko, MD
Vice Chair, Clinical Programs,
Department of Family and
Community Medicine

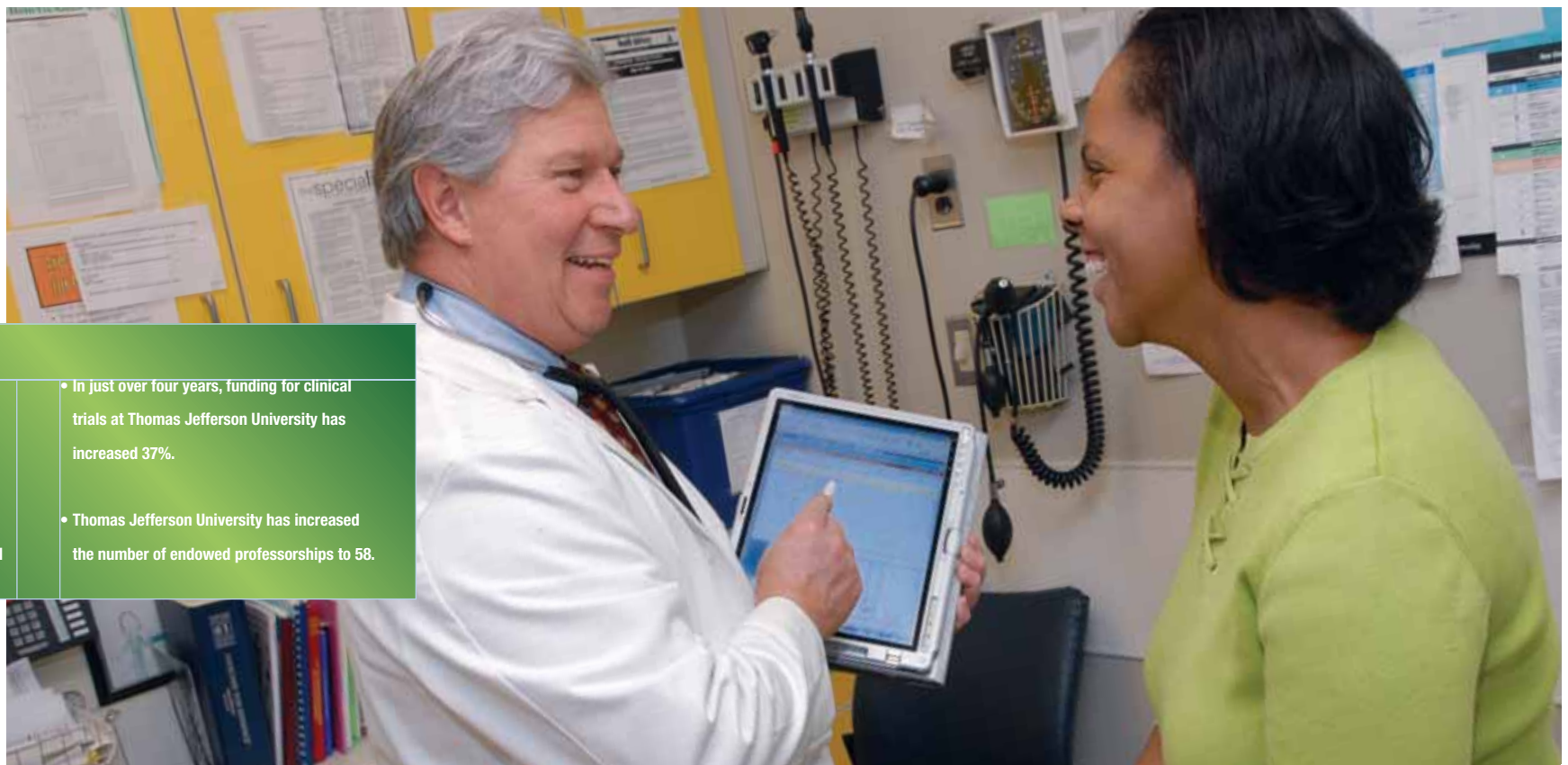
Patient Care Information Transformation

Imagine a healthcare system where paper charts no longer exist; where lab results are available through a secure electronic interface; and the opportunity for errors is reduced. That time is now, as Jefferson University Physicians (JUP) implements the first phase of its Electronic Medical Records (EMR) system.

After a comprehensive system and process redesign, JUP has integrated EMR into the practices of Family and Community Medicine and the Department of Otolaryngology. In the spring they went live with TouchWorks™ under the direction of William M. Keane, MD, Executive Sponsor, and with support from George Valko, MD, physician advocate. Through this project, desktop computers and other technologies have been placed in various exam rooms and physician and administrative offices.

With a seamless online interface, physicians can have immediate electronic access to their patients’ health and medication histories as well as have the ability to record new data. Health information has been scanned into the system, eliminating more than 65,000 paper charts. The functionality and efficiency of JUP offices using the technology have significantly improved and JUP has embraced the EMR as an invaluable tool in providing a higher level of personalized outpatient care.

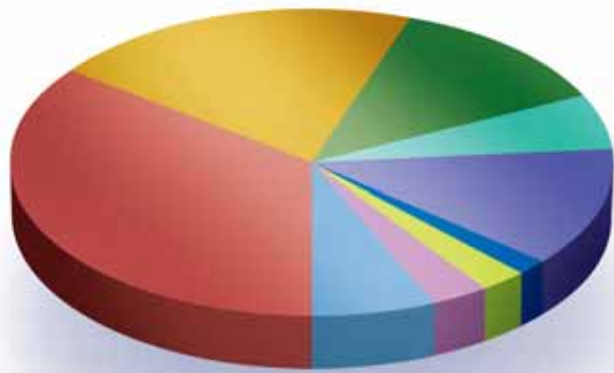
George Valko, MD, Vice Chair, Clinical Programs, Family and Community Medicine, is a physician advocate for Jefferson’s Electronic Medical Records (EMR) system. The system provides “anywhere-anytime” access to patient records, lab tests and more. With the EMR now live in a number of departments, patients will experience even higher levels of efficiency through the increased accuracy and information availability the system provides.



Accomplishments

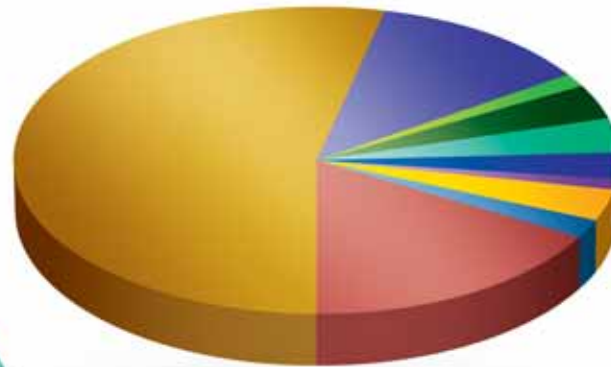
- Thomas Jefferson University and the University of Delaware have formed a partnership in the Medical Scholars, occupational therapy and pharmacy programs. Future collaborations are being considered in nursing, health policy, population health, rehabilitation sciences, physical therapy and biomedical engineering.
- In just over four years, funding for clinical trials at Thomas Jefferson University has increased 37%.
- Thomas Jefferson University has increased the number of endowed professorships to 58.

Financials



Operating Revenues

| | |
|---|-------|
| Professional activities | 35.4% |
| Grants and contracts | 20.2% |
| Hospital support for physician services | 12.5% |
| Corporate services reimbursement | 5.6% |
| Tuition and fees | 12.5% |
| State appropriation | 1.8% |
| Endowment payout | 2.5% |
| Contributions | 3.1% |
| Other revenue | 6.4% |



Operating Expenses

| | |
|-------------------------------|-------|
| Salaries and wages | 53.8% |
| Employee benefits | 11.9% |
| Financial aid and fellowships | 1.3% |
| Insurance | 3.6% |
| Utilities | 3.8% |
| Bad debt | 2.6% |
| Interest | 1.1% |
| Depreciation | 3.3% |
| Rent | 2.2% |
| Supplies and other | 16.4% |



Financials

| Statement of Financial Position | | Statement of Activities | | | | |
|---|-------------------|---|---------------------|-------------------------------|-------------------------------|--------------------|
| As of June 30, 2008 | | As of June 30, 2008 | | | | |
| (\$ in thousands) | | (\$ in thousands) | | | | |
| | | | Unrestricted | Temporarily Restricted | Permanently Restricted | Total |
| Assets | | How We Received Our Revenues | | | | |
| Cash and short-term investments | \$ 158,319 | Professional activities | \$ 212,841 | | | \$ 212,841 |
| Accounts receivable | 34,469 | Grants and contracts – Direct | 121,193 | | | 121,193 |
| Assets whose use is limited | 49,636 | Hospital support for physician services | 75,344 | | | 75,344 |
| Investments | 450,252 | Corporate services reimbursement | 33,914 | | | 33,914 |
| Pledge receivable | 14,071 | Tuition and fees | 74,988 | | | 74,988 |
| Loans receivable | 30,787 | State appropriation | 10,852 | | | 10,852 |
| Prepaid pension | 13,981 | Endowment payout | 7,827 | \$ 7,202 | | 15,029 |
| Property, plant & equipment | 222,703 | Net assets released from restriction | 18,326 | (18,326) | | 0 |
| Other assets | 15,501 | Contributions | 4,658 | 13,715 | | 18,373 |
| Total Assets | \$ 989,719 | Other revenue | 38,777 | | | 38,777 |
| | | Total Revenues | \$ 598,720 | \$ 2,591 | | \$ 601,311 |
| Liabilities | | How We Spent Our Revenues | | | | |
| Accounts payable and accrued expenses | \$ 68,172 | Salaries and wages | 314,625 | | | 314,625 |
| Sponsored program advances | 20,179 | Employee benefits | 69,572 | | | 69,572 |
| Accrued professional liability | 53,411 | Financial aid and fellowships | 7,810 | | | 7,810 |
| Federal student loan advances | 18,648 | Insurance | 20,931 | | | 20,931 |
| Deferred giving obligations | 3,961 | Utilities | 22,018 | | | 22,018 |
| Deferred revenue | 8,450 | Bad debt | 15,067 | | | 15,067 |
| Long-term obligations | 186,569 | Interest | 6,297 | | | 6,297 |
| Other liabilities | 9,529 | Depreciation | 19,514 | | | 19,514 |
| Total Liabilities | \$ 368,919 | Rent | 13,019 | | | 13,019 |
| | | Supplies and other | 96,098 | | | 96,098 |
| Net Assets | | Subtotal expenses | \$ 584,951 | | | \$ 584,951 |
| Unrestricted | \$ 339,441 | Operating gain | \$ 13,769 | \$ 2,591 | | \$ 16,360 |
| Temporarily restricted | 158,948 | Non-operating items, net | (\$ 30,556) | (\$ 13,318) | (\$ 1,638) | (\$ 45,512) |
| Permanently restricted | 122,411 | Decrease in net assets | (\$ 16,787) | (\$ 10,727) | (\$ 1,638) | (\$ 29,152) |
| Total Net Assets | 620,800 | Net assets, beginning of year | 356,228 | 169,675 | 124,049 | 649,952 |
| Total Liabilities and Net Assets | \$ 989,719 | Net assets, end of year | \$ 339,441 | \$ 158,948 | \$ 122,411 | \$ 620,800 |

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