

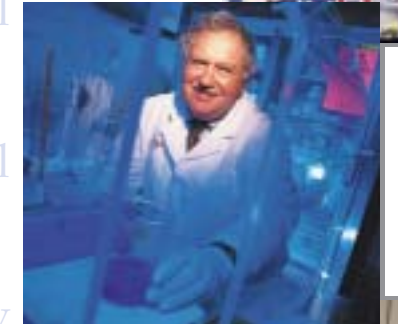
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NEW JERSEY MEDICAL SCHOOL



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Jersey Medical School **2002 Annual Report**



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School New Jersey



“New Jersey Medical School is a vital, integral part of what is happening with the rejuvenation of Newark. The school is a center of excellence not only in research, but in the delivery of care it provides to neighboring communities.”

John J. Petillo, PhD, President & CEO, Newark Alliance, and Member, NJMS Board of Advisors

VISION

The vision of New Jersey Medical School is to create, transmit and utilize knowledge to shape the future of medicine and to enhance the quality of life for the people of New Jersey.

MISSION

The mission of New Jersey Medical School is to educate students, physicians and scientists to meet society's current and future healthcare needs through patient-centered education; pioneering research; innovative clinical, rehabilitative and preventive care; and collaborative community outreach.

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A MESSAGE from the dean

We live in a time of change, both as a society and as a medical school community. During the past year, New Jersey Medical School (NJMS) has taken several steps toward achieving our goals of building excellence and becoming one of the best medical schools in the nation.

Building excellence takes time. While we have set ourselves challenging goals for the next few years, we believe NJMS is uniquely positioned to achieve them. Our geographic location in northern New Jersey, in close proximity to New York City, provides us with a tremendous advantage in attracting top-quality students and faculty. Our neighbors include the state's thriving pharmaceutical industry, offering opportunities for research partnerships.

In planning for the future growth of New Jersey Medical School, we are focusing on five priority areas: infectious diseases, trauma, cardiovascular science, neurological and visual sciences, and cancer. All are specialties in which we already demonstrate a level of expertise. To bring them to the next level of excellence, we have recruited several outstanding faculty members, leaders in their specialties who are leaders on campus.

With an ambitious building program under way on the Newark campus, including a \$100 million cancer center, a substantial increase in NIH-funded research over the past five years, and a new curriculum being developed, the future holds much promise for NJMS, the oldest of the three medical schools of the University of Medicine and Dentistry of New Jersey.

There's an old saying that advises, "To know where you are going, you have to know where you've been." While we are excited about what the years to come will bring to our school, we take pride in what we have achieved. This annual report describes a mere fraction of the accomplishments of NJMS and introduces only a few of the people who make our school an excellent place for educating, conducting research, and delivering clinical care. And, when all is said and done, this is only paper. The "living documents" of NJMS's excellence are the students we educate, the patients we treat, the community we serve, and the discoveries we make.

I invite you to join NJMS on the road to excellence. It will be, I assure you, a thrilling and wonderful ride.

Russell T. Joffe, MD
Dean, New Jersey Medical School

PRIME 2005 striving for excellence

New Jersey Medical School has undertaken a mission based management initiative called PRIME 2005 (Prioritize and Realign Incentives through Missions and Excellence). This initiative involves both the development of a team management structure for NJMS and the development of reporting systems that will enable NJMS to better align its missions and resources. While PRIME 2005 is tailored to meet NJMS's needs, mission based management is part of a nationwide program organized by the Association of American Medical Colleges.

PRIME 2005 began in 2001 and is driven by input from all areas of the medical school. A retreat and Town Hall meetings were convened to both share information concerning the project and gather feedback to enhance it. Democratic governance has been established for managing NJMS by forming seven teams comprised of faculty and staff that report to the Dean's Executive Group. This new management structure has already proven effective in guiding policy, operations and planning at NJMS while providing another forum for faculty to present their issues and ideas. NJMS's strategic planning process has been integrated within this new structure and has resulted in a more cohesive strategic plan. The information-reporting component of PRIME 2005 will enable individuals to assess their contributions to the school and strengthen NJMS's decision-making process. Currently, faculty and staff requirements for the new information system are being finalized and the technology infrastructure is being designed.

When fully implemented, PRIME 2005 will:

- Consolidate and integrate multiple databases into one system.
- Create management reports that assess the status of operations on a department and school-wide basis.
- Provide accurate and real-time information that will create trust in the data.
- Enable faculty to validate their information and evaluate their contributions.
- Assist Chairs in assessing faculty contributions.
- Recognize and reward individual performance excellence.
- Align department operations with the school's strategic plan.
- Allocate resources according to mission.



PRIME 2005 Team Facilitators

Advancement Robert L. Johnson, MD

Clinical Edwin A. Deitch, MD

Education Stephen R. Baker, MD

Facilities Joel A. DeLisa, MD, MS

Finance Marco A. Zarbin, MD, PhD

Information Technology William E. Reichman, MD

Research Charles H. Kellner, MD



New Jersey Medical School Board of Advisors

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New Jersey Medical School Advisory Board

New Jersey Medical School is fortunate to have many volunteers to help fulfill its mission. During the past year, NJMS Dean Russell T. Joffe, MD, has recruited influential New Jerseyans with an interest in academic medicine, medical education and research to form a volunteer board. Their key objective is to facilitate the school's growth and development.

According to Dr. Joffe, NJMS will benefit from the expertise and commitment of individuals who recognize the school as a force in the medical arena. "It is our firm belief that New Jersey corporations, foundations and residents have a keen interest in health and healthcare," he says, "and will support the school's excellent programs."

One of the board's first tasks will be to increase the visibility and enhance the profile of New Jersey Medical School and to form alliances with supporters who will help fulfill its mission. The Board will create opportunities for NJMS academic, research and healthcare leaders to meet individuals and groups with common interests.

"I am honored to work with such a talented group of individuals. Under the leadership of Dean Joffe, this Board has the opportunity to make important and meaningful changes to bring the medical school's image and research capabilities to a new level," notes board member Ruthi Zinn Byrne.

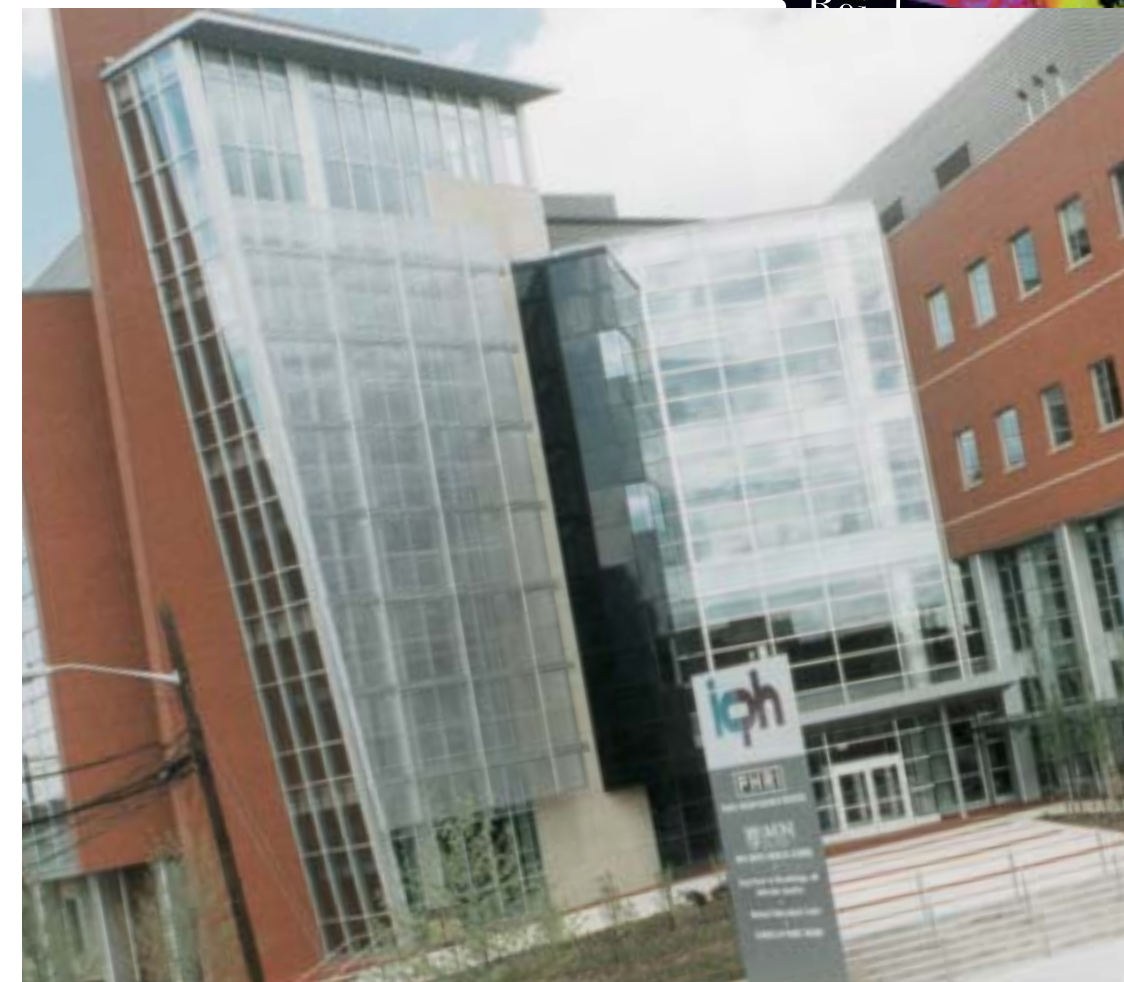
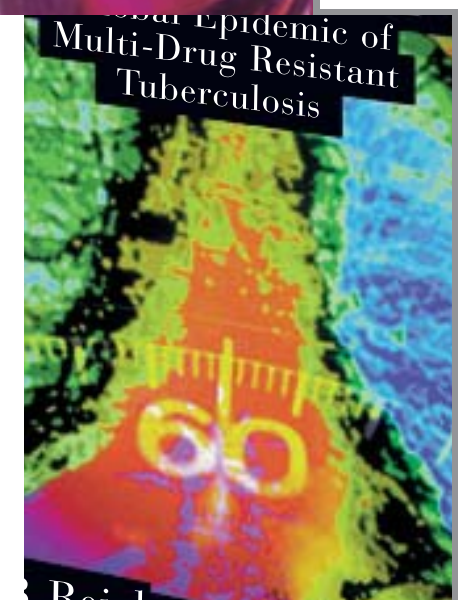
In addition to the New Jersey Medical School Board of Advisors, volunteer boards have been formed for the Neurological Institute of New Jersey, The Autism Center and the Institute for Ophthalmology and Visual Science.

Infectious Diseases

Infectious Diseases

Taking The Initiative

Whether revisiting familiar infectious agents, including smallpox, HIV and tuberculosis, or investigating newer threats, such as anthrax, New Jersey Medical School's renowned infectious disease specialists are making inroads against these and other dangers to public health. A vitally important new initiative, bioweapons research and preparedness, is the primary mission of the Center for BioDefense at NJMS. In addition, the International Center for Public Health opened this spring. A public/private partnership, it houses the Public Health Research Institute (PHRI), which relocated from New York City, as well as the NJMS Department of Microbiology and Molecular Genetics and the NJMS National Tuberculosis Center. These centers, and the school's continuing efforts to curb the spread of TB and the incidence of HIV, are the building blocks of one of the foremost infectious disease programs in the country.



International Center for Public Health Has Global Mission, Newark Address



The International Center for Public Health (ICPH), which opened its doors on May 2, 2002, in Newark's University Heights Science Park, has a global mission. The \$78 million facility is home to the NJMS National TB Center, the school's Department of Microbiology and Molecular Genetics, and the Public Health Research Institute, formerly based in New York City. The ICPH addresses global public health aspects of infectious diseases through research, clinical, and educational programs, and serves as an international resource that encourages change in managing this threat.

For a time, many nations were lulled into a false sense of security regarding infectious diseases. With the development of vaccines and improved antibiotics, viral diseases and bacterial infections became easily treatable. Today, drug-resistant strains of tuberculosis, the over-prescription of antibiotics, and the prospect of bioterrorism have re-awakened a global community to the threat infectious diseases present.

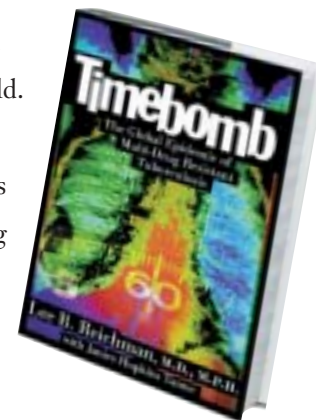
ICPH brings together an extraordinary, innovative, and focused team dedicated to such projects as drug and vaccine development, rapid diagnostics, antibiotic resistance, and new methods for tracking the spread of infectious diseases.

TB: The Disease That Won't Go Away

Before the early 1950s, TB, an infection spread through droplets that remain in the air when someone with the disease coughs or sneezes, sent many adults and children to sanatoriums. With the advent of antibiotic therapy in the 1950s, the disease became curable, or so the medical community thought. Then along came HIV, which lowers immunity and places those infected at higher risk for other diseases. A team of researchers led by Dr. Lee Reichman, professor of medicine and preventive medicine and community health, was the first to report the co-infection between HIV and TB and warn of a potential epidemic. In the late 1980s and early 1990s, TB came roaring back in many U.S. cities. Then came multi-drug resistant tuberculosis, a worldwide problem prevalent in such places as Siberia, but with the potential to spread anywhere.

In 1993, Dr. Reichman established the NJMS-National Tuberculosis Center, one of three national centers. A cooperative venture between the medical school and the New Jersey Department of Health and Senior Services, the Center developed a treatment program that successfully reduced Newark's TB rate by 75 percent. The Center has also improved TB diagnosis and prevention, creating an international training program to reduce infection rates in TB hot spots around the world.

Dr. Reichman, who is executive director of the National Tuberculosis Center, shares his experiences battling this killer in his award-winning best seller, *Timebomb*.



The Best Defense

On September 10, 2001, the research being conducted at New Jersey Medical School's Center for BioDefense was as vital as it was the next day. Most Americans just did not realize it.

But with the subsequent release of anthrax and the concept of bioterrorism against Americans becoming a reality, the Center leveraged its expertise in infectious disease research and emergency management to improve America's ability to respond to bioweapons.

The Center for BioDefense was established in 1999 with grants totaling more than \$3 million. Based at NJMS and under the direction of Dr. Nancy Connell, vice chair of research, department of medicine, its members include faculty from UMDNJ's eight schools.

During the past year, a state-of-the-art, high-security biosafety Level III laboratory was completed, the setting for the Center's experiments. A \$3 million grant from the U.S. Department of Defense funds research on *Bacillus anthracis* (anthrax), *Yersinia pestis* (plague), *Francisella tularensis* (tularemia),

MDR-TB (multi-drug resistant tuberculosis) and other organisms. "Most of these agents have been weaponized," says Dr. Connell (pictured above, center, with deputy director Brendan McCluskey, right, and Jessica Mann, research teaching specialist). The goal is to develop a test that can distinguish between infecting agents. If a lab can take a blood sample and promptly identify which microorganism is involved, then antibiotic or antiviral therapy specific to the disease can be started right away, when chances of successful treatment are high.

The Center for BioDefense's work spans the lab and beyond. Center members conduct educational and response planning seminars for government and industry leaders, scientists, public safety personnel and healthcare workers. Since September 11, 2001, they have led more than 100 such sessions.

Another goal of Dr. Connell's is development of a biological weapons inspection program similar to the chemical weapons program that establishes compliance protocol and provides for spot checks. Once such a program is created, the Center has the expertise to conduct comprehensive training programs for inspectors.



A Clinic of Their Own

In Uganda, HIV/AIDS remains a major public health concern. About 8.3 percent of Ugandan adults are infected with HIV, and access to anti-retroviral medicines is

limited to a very few. The prospects for change, however, are bright, as the Academic Alliance for AIDS Care and Prevention in Africa announced the formation of the first large-scale HIV/AIDS clinic on the continent.

New Jersey Medical School's connection to this project is Dr. Jerrold J. Ellner (above, far right), professor and chair of the department of medicine and a founding member of the Academic Alliance. He has traveled to Uganda to share his expertise in infectious disease, and in January 2002,

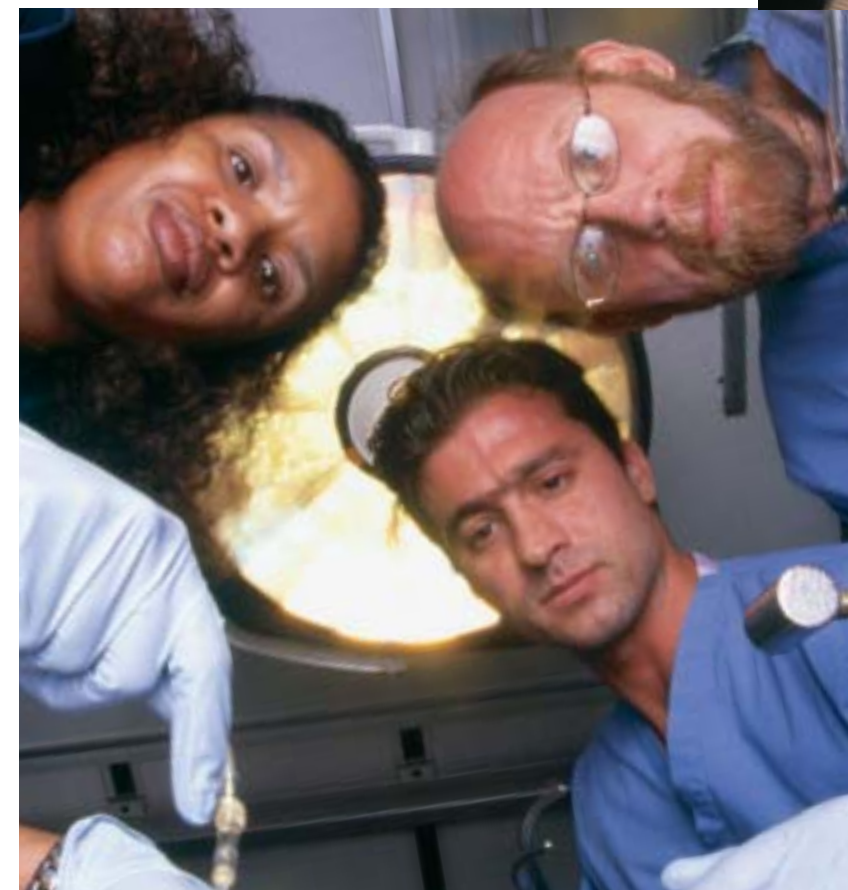
three physicians from Makerere University in Uganda came to New Jersey for training. "With an estimated 820,000 people in Uganda living with HIV/AIDS and another 25 million HIV-infected people living in sub-Saharan Africa, it was gratifying to share our expertise in treatment options for these patients," says Dr. Ellner, who has been actively involved in HIV/AIDS in Uganda since 1987.

Funding for the clinic, estimated at \$11.7 million, is being provided by Pfizer Inc., which also is offering Diflucan anti-fungal medicine at no charge to HIV/AIDS patients in more than 50 least-developed countries. Pfizer chairman and CEO Henry McKinnell says, "HIV/AIDS is the most serious public health issue of our time, and public/private partnerships like the Alliance are critical to stopping the spread of the disease and improving the quality of care."

Trauma Trauma Trauma

Taking The Initiative

The New Jersey Trauma Center (NJTC) at University Hospital, the primary teaching facility of New Jersey Medical School, is not just another emergency room. One of only three Level 1 trauma centers in the state, NJTC combines superior patient care, commitment to academic research and dedication to education. Nearly 3,100 people were treated at the NJTC in 2002, and University Hospital recently expanded its emergency department to accommodate an increasing number of patients.



Meeting Trauma With Teamwork

“No one thinks they are going to ‘get’ trauma,” says Dr. David Livingston, professor of surgery at New Jersey Medical School. “Trauma is something that happens to you.”

In 2002, serious injury occurred to nearly 3,100 patients brought to the New Jersey Trauma Center at University Hospital, where Dr. Livingston (far right) is chief of trauma. A state-designated Level 1 Trauma Center serving northern New Jersey, it has a full range of services, including dedicated operating rooms, a trauma-surgical intensive care unit, board-certified trauma surgeons, specially trained nurses, and access to many subspecialists, including a neurosurgical staff with expertise in spinal cord and head injuries and a microsurgical limb replantation team.

Academic Level 1 trauma centers are not the same entity as local emergency rooms. They have the expertise and resources to care for mass casualties and the most seriously injured. “People who otherwise might have died survive and go on to lead productive lives,” says Dr. Livingston. “Trauma center care impacts non-life-threatening cases as well. The trauma surgeon might be able to save a patient’s leg, rather than amputate it.”

Another defining feature of Level 1 trauma centers is a commitment to research, education, and outreach. Researchers at the New Jersey Trauma Center have received more than \$3 million from the National Highway Traffic Safety Administration and more than \$2 million from the National Institutes of Health.

The Center is also a member of Governor James McGreevey’s Medical Emergency and Disaster Preparedness and Response Expert Panel (MEDPREP), which is charged with preparing for terrorism on the state level.



For Trauma and Burn Patients, The Gut Matters

Years of treating burn and trauma patients who developed infections, septic shock and multiple organ failure (MOF)

piqued the interest of Dr. Edwin A. Deitch. A trauma surgeon, Dr. Deitch is professor and chair of the department of surgery at New Jersey Medical School.

Trauma creates conditions favorable for infection, and burns, destroying protective layers of skin, make these patients susceptible to infection. However, that is only part of the story. His work and the work of others have shown that major injury

or shock causes the body to produce factors that injure itself. In this way, one by one, the body’s organs begin to shut down, leading to MOF. Today MOF is the leading cause of death in intensive care units.

“My questions as a researcher were: Where do the factors come from to start this lethal cycle, why do they lead to MOF, and how can we model it?” says Dr. Deitch. He and his research team identified the gut as the source of toxic factors that lead to MOF and documented that they enter the body through the lymphatic route.

As more is discovered about gut origin sepsis and MOF and improved methods of modulating the body’s response to injury are developed, the better the outlook will be for trauma and burn patients.

A Doctor in the House

With trauma surgeon Dr. Eric Muñoz, there is a doctor in the house: the New Jersey State House.

Dr. Muñoz, professor of surgery, was elected to the New Jersey General Assembly in 2001. He represents the 21st District, which includes portions of Essex, Morris, Somerset, and Union counties, and is one of two doctors serving in the New Jersey Legislature.

While Dr. Muñoz’s legislative work spans a broad range of issues, it is clear that he has not forgotten his medical roots. He has sponsored bills that would establish limits on medical residents’ hours; provide stipends to new graduates of nursing programs; and require health clubs to have a defibrillator on site.

End-of-Life Care For Trauma Patients

Despite the best efforts of a trauma team, some people die while in the unit. And yet, palliative care for trauma patients is a badly neglected area.

That’s what Dr. Anne Mosenthal, associate professor of surgery, believed, so she and Dr. Pat Murphy, an advanced practice nurse, applied for a grant. In July 2000, they received a two-year, \$150,000 grant from the George Soros Foundation’s Project on Death in America to develop a palliative care program for a trauma and critical care unit. Additional funding for two counselors and a minister came from the HealthCare Foundation of New Jersey.

“Palliative care in trauma and critical care settings is very different from what occurs elsewhere in a hospital,” says Dr. Mosenthal. “The patients are younger, their injuries are sudden, and the families have little time to prepare emotionally for their loved one’s death.”

The program Dr. Mosenthal and Dr. Murphy developed includes educating trauma surgeons on palliative care and integrating it within the trauma and critical care system. One result, notes Dr. Mosenthal, underscores the concept of death with dignity: “There was a substantial increase in the number of patients withdrawn from life support, rather than existing on ventilators.”

UH Emergency Department Expands

With an upswing in patient visits to University Hospital’s Emergency Department and limited space, there was one solution: remodel.

Renovations to the department, which began in 2001, were completed in December 2002. More treatment bays have been added to the pediatric, fast track, psychiatric emergency service and adult areas, and the trauma area has new lighting and flooring and a larger nursing station. Specialty rooms have been added to increase isolation capacity.

Treatment bays alone will not satisfy patients’ needs, so staff has been added: 14 nurses and 14 Emergency Department technicians. “We’re combining the customer service of a community hospital emergency department with the excellence of an academically based hospital,” says Charles Flinn, executive director, emergency services.



A Life Saved... A Family Cared For

November 7, 2001, is forever engrained in Livingston Councilwoman Eleonore Cohen’s mind. It was the day she received

the phone call no one wants: her husband, Max, was involved in a serious car accident in West Orange. When Mrs. Cohen arrived, emergency workers were extricating her husband, who was badly injured, yet conscious. When Mrs. Cohen said she wanted her husband taken to a nearby hospital, the paramedic responded, “Your husband doesn’t belong there. He belongs at the New Jersey Trauma Center at University Hospital.”

Any reservations Mrs. Cohen had about the choice of hospital quickly vanished. “Everyone at University Hospital was wonderful to my husband and my family. He received excellent care,” says the councilwoman. “When I arrived, a social worker prepared us for what to expect. A nurse said she would keep in touch with us at all times about his condition, and she lived up to her promise.”

Mr. Cohen’s problems were extensive: an open fracture of the right wrist; a broken right fibula; a broken tibia; broken ribs and sternum; and fluid in his lungs. He required surgery and remained at University Hospital for two weeks before being transferred to a partner facility, the Kessler Institute for Rehabilitation. The 66-year-old recovered well from his injuries and is able to play golf and sail his boat.

“We’re so appreciative of the superb care Max received at University Hospital,” says Mrs. Cohen. “And our family was well cared for, too.”

Medevac Helicopter Saves Lives

The most important time for trauma treatment and life-saving surgery is within 60 minutes of the moment of injury, or the “golden hour.” For critically injured patients, NorthSTAR, University Hospital’s medical helicopter, saves time — and lives.

“Safety and timeliness are our most important concerns,” says flight nurse Carl Corriere, RN, MSN. He was on board the helicopter during its first rescue in 1988, and 14 years later, is still flying critically ill or injured patients to a trauma center. In 2002, the NorthSTAR team completed 696 missions, including inter-hospital transport of ICU patients. Its crew includes two New Jersey State Police pilots, a flight paramedic, and a flight nurse.

Patients and their families never forget the commitment of the NorthSTAR crew. At NorthSTAR’s 10-year anniversary barbecue, a police officer who was severely injured several years ago in an auto accident and transported by Mr. Corriere was in attendance. His wife approached Mr. Corriere with two words: “Thank you.”



Cardiovascular Science Cardiovascular Science Cardiovascular Science

Taking The Initiative

Three of the four leading causes of death in the United States are cardiovascular in nature: heart attack, congestive heart failure and stroke. They occur with greater incidence among African Americans, but affect Americans from all backgrounds. NJMS takes a two-pronged approach toward the elimination of heart disease: research, with the Cardiovascular Research Institute (CVRI); and patient care, with the New Jersey Cardiovascular Institute (NJCI).

CVRI Takes The Newark Community's Needs to Heart



Heart failure remains the pre-eminent cardiovascular health problem in the U.S. despite recent advances in its treatment. In the Cardiovascular Research Institute, directed by Dr. Stephen F. Vatner, professor and chair of the department of Cell Biology and Molecular Medicine, a multidisciplinary research team (some of whom are pictured above, left, with Dr. Vatner) is uncovering the causes of heart disease and heart failure and developing novel approaches to its treatment.

The focus of Dr. Vatner's laboratory ranges from physiology to molecular biology, biochemistry to pathology. One research program aims to identify the physiological, biochemical and molecular mechanisms that are fundamental to the progression of pathogenesis of hypertrophy to heart failure. Another program examines these same mechanisms as they relate to the progression of ischemic heart disease and its ultimate progression to heart failure.

Why do the aged appear to be at higher risk for heart disease and heart failure? Are men at greater risk than women? A major effort of the Cardiovascular Research Institute attempts to answer these and other questions. Other individual projects include examination of congenital heart disease; cardiovascular pathophysiology; and regulation of gene expression in different models of heart disease and heart failure.

These unique integrative approaches have led to many outstanding late-breaking discoveries, keeping NJMS on the cutting edge of cardiovascular research.

EECP Treatment Enhances Options for Angina Patients

About 7 million people have angina pectoris, a recurring tightness or pressure in the chest. During an angina episode, the heart's demand for oxygen exceeds the supply because of narrowed or blocked coronary arteries.

Medical therapy for angina includes nitroglycerin, beta blockers, and calcium channel blockers, but over time, these drugs can become ineffective. Should that occur, two procedures are considered: angioplasty and coronary artery bypass.

The New Jersey Cardiovascular Institute was one of the first in the nation to offer a new, non-invasive treatment for angina. Enhanced External Counter Pulsation®(EECP) can reduce the symptoms of angina by stimulating the opening, or formation of, small branches of blood vessels (collaterals) to create a natural bypass around narrowed or blocked arteries. Inflatable cuffs are wrapped around the patient's calves, lower thighs, and upper thighs. A pressure source inflates and deflates these cuffs. This counterpulsation increases the supply of oxygen to the heart and decreases the demand on the heart to pump the blood to the entire body.

A New Partner in Cardiac Care

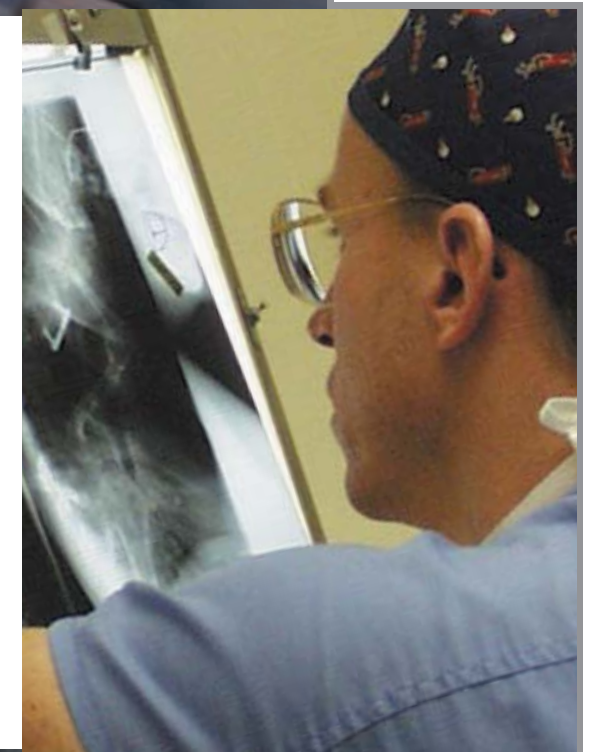


On July 1, 2002, a new cardiac surgery program was launched, uniting New Jersey Medical School and The University Hospital with the Columbia University College of Physicians and Surgeons. Two Columbia physicians have taken on positions at The University Hospital: Dr. Barry Esrig (center) is chief of the division of cardiothoracic surgery, and Dr. Douglas Jackson (left) is the vice chairman of critical care in the department of anesthesiology. Dr. Jackson will direct the Cardiothoracic Surgery Intensive Care Unit, currently under construction. Overall administration and quality assurance for the division of cardiothoracic surgery will be provided by Dr. Eric Rose, chairman of the department of surgery at Columbia University College of Physicians and Surgeons. They join Dr. Michael Banker (right), the director of cardiac surgery at The University Hospital.

Neurological & Visual Sciences
**Neurological &
Visual Sciences**
Neurological & Visual Sciences

Taking The Initiative

The mysteries of multiple sclerosis, the prevention of stroke, and the salvaging of sight are three areas where world-class researchers at New Jersey Medical School continue to make progress. The Neurological Institute of New Jersey is widely known for its distinguished team of multiple sclerosis researchers and clinicians. NJMS's Institute of Ophthalmology and Visual Science (IOVS) is the only ophthalmology program in the state staffed by full-time academic faculty. IOVS has two Centers of Excellence: The Center for Macular Degeneration Treatment & Research and The Ophthalmic Clinical Trials Center.



An Institute with Its Eye on Vision

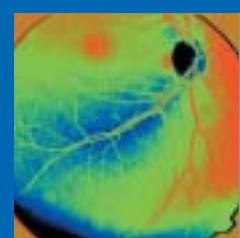
The story behind the Institute of Ophthalmology and Visual Science (IOVS) at NJMS is one of carefully guided growth. Since 1994, the clinical faculty has doubled and grant support has increased five fold to \$3.3 million annually. In the past five years, patient visits are up 20 percent, and the number of surgical procedures has increased 40 percent.

The Institute's 12 full-time clinicians treat a wide range of patients, some with simple needs, but many who have uncommon visual conditions or are facing high-risk ocular surgery. "Our purpose is to support our community ophthalmologists – many, incidentally, who completed their residencies at NJMS," says Dr. Marco A. Zarbin, professor and chair of the department of ophthalmology and visual science.



IOVS receives substantial National Eye Institute funding and grants from organizations such as The Lions Eye Research Foundation of New Jersey, which has pledged to raise \$1.5 million to endow a New Jersey Lions Eye Research Chair. "While IOVS research ultimately will benefit people worldwide," says Dr. Zarbin, "it's important to serve the local community." Diabetes disproportionately affects minorities. When it is not well controlled and blood sugar levels are high, changes in the retina's blood vessels can occur and cause blindness if left untreated. This condition, known as diabetic retinopathy, is treatable if detected early. Dr. Monique Roy, associate professor of ophthalmology and visual science, and an expert in diabetic retinopathy, has a \$4.5 million NEI grant to study risk factors for diabetic retinopathy in African Americans.

IOVS offers the only ophthalmology residency program in New Jersey staffed by full-time academic faculty, and about 40 percent of the graduates practice in the state. "We have, both directly and indirectly, a tremendous impact on the quality of visual health care in New Jersey," says Dr. Zarbin. The program received re-accreditation from the Residency Review Commission without citation, the highest level possible.



NJMS and NJIT Share a Vision

Helen Keller said, "Alone we can do so little; together we can do so much." So it's especially significant that ophthalmologists at NJMS and

researchers at New Jersey Institute of Technology are working together on three vision-related projects.

Ophthalmologists, physicists, and biomedical engineers at the two schools are developing a home-testing device that will enable glaucoma patients to measure their intra-ocular pressure (IOP). Pressure levels can be measured by an ophthalmologist, but studies show that frequent testing for elevated IOP can help reduce vision loss. A second project, a device implanted in eyeglass frames, will monitor blood glucose levels in eye fluid, and a third initiative, imaging spectroscopy of the retina, will measure retinal changes associated with hypertension, diabetes,

glaucoma, and macular degeneration.

Dr. Robert D. Fechtner (right), professor of ophthalmology and visual science at NJMS, and Dr. Gordon A. Thomas (left), professor of physics and biomedical engineering at NJIT, are co-directing the projects.



Autism Center Provides Comprehensive Care For ASD Patients



Many questions about Autism Spectrum Disorder (ASD) are unanswered, but one solution was provided in April 2002 when The Autism Center of New Jersey Medical School opened its doors.

For people with ASD and their caregivers, traveling from one specialist to the next adds to the often overwhelming nature of this neurological disorder. Now, patients can receive treatment or participate in clinical studies at one place. The Center, under the direction of Dr. Xue Ming, (above, left), assistant professor of pediatric neurology, integrates applied research, treatment, outreach and education.

Individualized treatment plans are developed for each of the Center's 400 patients. Depending on the patient's needs, he or she can receive services from a pediatric neurologist, a developmental pediatrician, a pediatric allergist, an immunologist, a psychiatrist, a child psychiatrist, a pediatric gastroenterologist, a social worker, a pediatric dentist, and other specialists.

ASD, while once considered rare, is now believed to affect 1-4 in 10,000 children. New Jersey has the highest prevalence rate of ASD in the nation. "We are making progress in understanding what causes ASD, but there is much work left to be done," says Dr. Ming. The Center, with 24 studies currently under way, is among the largest recipients nationally of autism research funding from the Centers for Disease Control and Prevention.



\$21 Million Stroke Prevention Study Compares Warfarin and Aspirin

Congestive heart failure (CHF) is a pervasive public health problem affecting about 4.5 million Americans, with 400,000 new cases diagnosed each year. Not only is CHF a cardiovascular condition, these

patients have a two to three times higher risk for stroke, making it a neurological concern as well.

Dr. Patrick Pullicino, professor and chair of neurology and neurosciences at New Jersey Medical School, is the principal investigator of a five-year, \$21 million National Institute of Neurological Disorders and Stroke trial comparing the use of warfarin and aspirin as stroke-preventing agents. The WARCEF study (Warfarin Versus Aspirin in Reduced Cardiac Ejection Fraction) is a randomized, double-blind clinical trial that will enroll about 2,860 patients at 70 sites. Twenty percent of the study participants will have had a recent stroke or a transient ischemic attack. The study is a collaboration between cardiology and neurology.

New Studies For Alzheimer's



NJMS Vice Dean Dr. William E. Reichman, a nationally recognized expert on dementia, and collaborators are investigating the potential of an antidepressant medication, mirtazapine, to treat disruptive symptoms in patients with Alzheimer's disease. Certain behavior patterns of Alzheimer's patients, including agitation and aggression, are highly stressful for

caregivers and contribute measurably to the decision to place a family member in a nursing home. Some four million Americans are affected by Alzheimer's disease, and the number is expected to increase substantially as the population ages.



Cancer

Taking The Initiative

Cancer claims far too many lives each year. New Jersey Medical School, with a \$100 million cancer center (pictured above) scheduled to open in 2004, and its cancer screening and public education programs, is making clinical care more accessible to the community it serves. Northern New Jersey residents will no longer have to travel long distances for weekly or monthly visits. They will be able to obtain quality care and participate in clinical trials close to home.

Open the Doors, Close the Gap



Here is the paradox: Minorities account for a disproportionately high number of cancer cases, yet they are poorly represented in the field of cancer research.

The Comprehensive Minority Biomedical Program of the National Cancer Institute endeavors to increase the number of minority scientists. Dr. Carlos Molina (left, with Dr. Ghasan Yehia) received an award from the program, which enabled him to present his most recent work at the American Association for Cancer Research annual meeting.

"This award opens doors to minorities," says Dr. Molina, an assistant professor of obstetrics, gynecology, and women's health. "Attending the conference was an invaluable opportunity to share research, exchange ideas, and network with other scientists."

Dr. Molina's research interests include genetic and epigenetic changes in prostate and endometrial cancers. In addition to running his own laboratory, Dr. Molina is also the director of the transgenic mouse facility at NJMS. According to Dr. Molina, transgenic mice are a crucial tool for today's biomedical research because they are ideal models on which to study diseases and test new treatments. The transgenic facility is an important addition to NJMS because it provides highly specialized services for our investigators in house.

Mobile Screening Program SAVES Lives

There are people who will not go to a hospital for cancer screenings. So when a federally funded, state-administered early detection program was announced, Dr. Diana DeCosimo, associate professor of medicine, thought, "Let's bring breast cancer and cervical cancer screening services to where the women are."

Screening Access of Value to Essex Women, or SAVE, does just that. A mobile unit brings the testing to virtually anyplace in the county where people will come to be screened: churches, health centers, schools. But before that, an outreach staffer goes to these locales, provides cancer education, and makes appointments for those who are interested. The free breast and cervical cancer screenings are available to women ages 50-64 whose annual income is three times the Federal poverty level or lower.

Managing Head and Neck Cancers

Head and neck cancers account for about 5 percent of all cancers. At NJMS and University Hospital, malignancies found in the voice box, throat, mouth, salivary glands, and sinuses total about 17 percent of diagnosed and treated cases.



A multidisciplinary program led by Dr. Soly Baredes (left), associate professor of surgery and chief of the division of otolaryngology-head and neck surgery, draws these patients to Newark. "Head and neck tumors can be difficult to manage in a community setting because of the complexity of treatment and the toll on patients and their families," says Dr. Baredes. Removal of a tumor at the skull base, for example, typically requires the skills of a neurosurgeon, an ophthalmologist, and a plastic surgeon, as well as Dr. Baredes, a renowned head-and-neck surgeon.

\$100 Million Cancer Center to Focus on Minority, Underserved Populations

When it comes to cancer, minority groups are not underrepresented. African-Americans, Latinos, and Asian-Americans are at special risk to develop certain types of cancer. African-American men, for example, have almost twice the rate of prostate cancer as Caucasian men and are twice as likely to die from the disease.

The mission of a new \$100 million cancer center being built on the New Jersey Medical School campus will focus on resolving some of these disparities. Many minorities live in the counties that will be served by the new center. Currently, University Hospital has approximately 30,000 outpatient cancer-related visits each year.

New Jersey Medical School is an excellent environment in which to learn and a thriving academic center that prepares students to become outstanding and caring physicians. Like its home city, Newark, NJMS has a student population that is rich in diversity.

Dual Degrees: The Best of Both Worlds

“A combined MD and PhD program provides a bridge between clinical medicine and basic scientific research,” says Dr. Jeffrey Wilusz (right), assistant dean of the seven-year MD/PhD program co-sponsored by NJMS and the UMDNJ-Graduate School of Biomedical Sciences.

That bridge – and several others – are conduits to integrated learning for highly motivated students at NJMS. In addition to the MD/PhD program, the school offers dual degrees that partner medicine with public health, business, and dentistry. During the academic year 2001-2002, about 175 students were enrolled in dual degree programs at NJMS, including the MD/MS in Health Care Management and the MD/Master’s in Informatics. On the undergraduate level, NJMS facilitates a combined baccalaureate/medical degree program with 10 institutions.

While these “bridges” take students to different places, NJMS’s dual-degree programs attract top-flight, motivated students.



NJMS Took Her Where She Wanted To Go

Dr. Jennifer Hannum, Class of 2002, is the first New Jersey Medical School graduate to enter the highly competitive emergency medicine residency program at Carolinas Medical Center in Charlotte, North Carolina. And for that, she credits NJMS for taking her to “good places.”

Dr. Hannum believes her medical school education prepared her well for the residency. “The trauma surgeons at New Jersey Medical School are amazing teachers who provided excellent training in emergency medicine,” she says. “Clinically, NJMS students see a wide range of patients, from inner city residents to those living in the surrounding suburbs. Newark is a unique place to learn.”

Reaching Out to Future Students



Through enrichment programs for teens and their teachers, New Jersey Medical School plants seeds of interest in science, medicine, and health-related careers. Classes for undergraduate college students help cultivate the skills necessary to enter medical school and dental school and succeed there.

The pre-college programs build academic skills and provide social support, mentoring, and leadership training for minority youths from Newark and surrounding areas. In 2002, about 275 students participated in programs such as BIOTREK: The Way to Go!, a summer science experience for Newark eighth graders and elementary school teachers. Another program, SMART-on-Saturday, helps local students in grades 8-12 stay on track for application to medical, dental, or health-related

professions schools. “Local students are particularly vulnerable to peer pressure, which discourages them from excelling in the sciences. We teach them that it’s okay to be a serious student who aspires to become a scientist,” says Dr. Ophelia Gona, program director. The Biomedical Research Program provides apprenticeships for high school seniors with biomedical scientists. The SMART Teacher program provides science training for teachers.

On the collegiate level, NJMS is one of 11 medical schools offering the Minority Medical Education Program (MMEP). The six-week summer medical school preparatory program, funded by The Robert Wood Johnson Foundation, provides free tuition, room, and board to eligible students. Another NJMS program, Students for Medicine and Dentistry, provides science course exposure, academic skill development, clinical experience, admissions workshops, and research opportunities.



Educating Tomorrow’s Doctors

The telephone rings, and it’s the Associate Dean for Admissions with welcome news. From the moment of that phone call, NJMS students begin a lifelong journey of medical learning. Their four years in Newark lay a strong, rich foundation that prepares them to be the best doctors possible.

Acceptance to NJMS is based on more than GPAs and MCAT scores. The Admissions Committee looks at the whole person, and for such qualities as perseverance and motivation, which are characteristic of excellent physicians. There were 2,248 applicants for the entering Class of 2006, of which 170 became members. Among medical schools nationwide, NJMS

is sixth in the number of African-American students and in the top 10 non-minority schools in the number of underrepresented minorities. Of the entering Class of 2006, 27 students were underrepresented minorities, and 46 percent were women.

Once on the Newark campus, NJMS students have numerous service, social, leadership, and external educational opportunities. More than 100 primary care physicians participate in one-on-one private office preceptorships for first-year medical students.

Medical board exams and residency matching are two litmus tests medical schools are measured against. NJMS students regularly score higher than the national average on board exams, and for the past five years, 100 percent of students seeking graduate medical education were placed in residency training programs.

New Curriculum for a New Generation

The practice of medicine is constantly changing, and at New Jersey Medical School the curriculum is being revised to reflect the challenges facing physicians.

NJMS students already benefit from the utilization of a clinical skills training center, problem-based learning, diverse clinical experiences, and an early exposure to patients. But a new curriculum, expected to be implemented in August 2004, will take the school’s commitment to excellence in medical education even further.

While still in its formative stages, the new curriculum will decrease lecture time in the pre-clinical years, provide seamless integration of the basic and clinical sciences, and increase the amount of integrative learning experiences.

Focusing on the Family

The Department of Family Medicine was formed at New Jersey Medical School in April 1991 to “elevate the status and stature of family practice in northern New Jersey.” One decade later, the department, chaired by Dr. Mark S. Johnson, has taken great strides toward its goal.

With 13 physicians on faculty, three doctors of philosophy, and a research nurse, the common thread running through the department is excellence in patient care, community outreach, research and education. One of its required predoctoral courses, Clerkship in Family Medicine, focuses on the early diagnosis and treatment of clinical problems common to the private practice of a family. The St. Mary Hospital in Hoboken was the department’s first residency site. The department’s ability to reach more families expanded in July 2002 by adding the Mountainside Family Practice Residency and the Overlook Family Practice Residency.

As the department’s reputation continues to grow, Dr. Johnson received two special honors in June 2001. He was appointed to the U.S. Preventive Services Task Force, a leading source of advice on clinical preventive services for primary care clinicians and health plans. Representative Robert Menendez also gave Dr. Johnson tribute in the U.S. Congress. “Dr. Johnson’s notable career as a family physician and medical researcher has earned him widespread praise from his peers and colleagues,” said Congressman Menendez. A few months earlier he was elected President-Elect of the Association of Departments of Family Medicine. He will assume the presidency in February 2003.

A Taste of Medical School

Some people come to know more about how their bodies work. Others want to find out if medical school is for them. NJMS’s Mini-Med School, open to the public, offers both experiences.

This 10-week program for the public attracted 270 students in 2002, from teenagers to senior citizens. Each session included a formal lecture by faculty members and small group discussions led by medical students. Topics included “Dispelling the Myths About Electroshock Therapy” with Dr. Charles H. Kellner, professor and chair, psychiatry; and “Religion and Bioethics,” a panel discussion led by Dr. Charles David Hunt, associate professor, neurological surgery, among others.

Mini-Med School students could also enroll in two elective weekend courses. One program dealt with accessing medical information and was taught by librarians of the George F. Smith Library of the Health Sciences. Upon successful completion of the second course, students could become certified in cardiopulmonary resuscitation.

An Educator’s Legacy

Dr. Albert Shih, assistant professor of anesthesiology and an NJMS faculty member for 26 years, passed away on his last day of service to the university. From this sad ending comes a hopeful beginning. Quite fittingly, the Albert Shih Humanitarian Award has been established for a senior anesthesiology resident. “It is an appropriate tribute to a dedicated man who derived great joy from teaching students,” says Dr. Melissa L. Davidson, interim chair of anesthesiology. “That was his purpose in life.”

NJMS 2002 Research

Some of the most exciting medical research in the nation is being conducted at NJMS. While the focus is on research that supports the school's initiatives, faculty members are actively engaged in a wide range of pioneering biomedical, clinical, behavioral and health services studies.

A Step Closer to Solving the MS Puzzle

A region of chromosome 12 was identified by researchers at NJMS as a possible genetic basis of multiple sclerosis, but the search is not yet over.

Three generations of a Pennsylvania Dutch family in which there were several cases of MS were studied by a team including Dr. Emilia Vitale, assistant professor of microbiology and molecular genetics; Dr. Christine Rohowsky-Kochan, professor of neurology and neurosciences; Dr. Marvin Schwalb, professor of microbiology and molecular genetics; and Dr. Stuart D. Cook, president of UMDNJ.

Dr. Vitale (right) analyzed the entire genome of each family member and identified a novel marker on chromosome 12 in the affected members. The research was published in the February 1, 2002, issue of the journal *Human Molecular Genetics*. The finding brings researchers closer to identifying the genetic link for MS, a project Dr. Vitale is continuing with funding from the National Multiple Sclerosis Society and the Wadsworth Foundation.



COX-2: Necessary for Healing Broken Bones

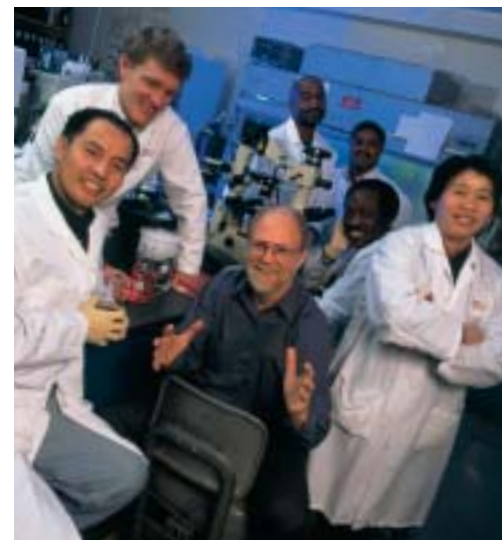
For many arthritis patients, selective non-steroidal anti-inflammatory drugs (NSAIDs) bring much needed relief. The medications inhibit production of COX-2, an enzyme that triggers the release of prostaglandins, which cause inflammation and produce pain. However, a study conducted by the Orthopaedics Research Lab at NJMS indicates that COX-2 is essential for normal fracture healing.

J. Patrick O'Connor, PhD, assistant professor of orthopaedics and microbiology and molecular genetics, found that fractures in rats given doses of two selective NSAIDs, Celebrex and Vioxx, did not heal properly. The results were confirmed in mice lacking a functional COX-2 gene. The study, which was published in the June 2002 issue of *The Journal of Bone and Mineral Research*, could impact how physicians treat bone fracture pain.

Mitchell Rosenthal, PhD, professor, physical medicine & rehabilitation, was the first recipient of the Robert L. Moody Prize for Distinguished Initiatives in Brain Injury and Rehabilitation. He has specialized in the care and study of brain injury patients and their families for 26 years.

Combatting Pediatric AIDS

Dr. Paul Palumbo (center, with team members), professor of pediatrics and biochemistry and molecular biology, directs several research programs targeting HIV infection in children and pregnant women within the Pediatric Division of Immunology and Infectious Diseases. He is principal investigator of the NJMS Pediatric AIDS Clinical Trials Unit (PACTU), part of a multi-center Clinical Trials Group (PACTG) organized by the Division of AIDS at NIH. The NJMS PACTU has conducted HIV clinical trials since 1987 and has, on average, 10 to 12 trials open for enrollment at any given time. New initiatives include trials for adolescents



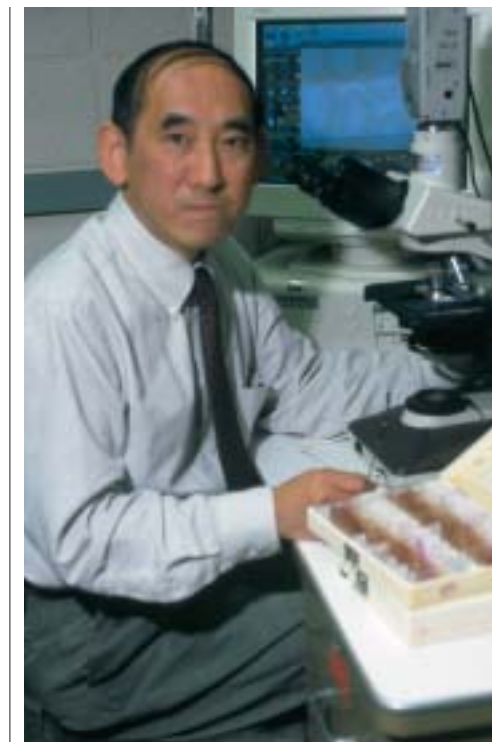
(a group in which new infections are on the rise), and international trials in partnership with mid-developed and developing countries.

A second venture includes a trial for the study of perinatal HIV transmission and pediatric disease progression which has been funded by the CDC since 1986. The NJMS unit is linked with three others on the east coast. Collectively, the study group has enrolled and followed more than 2,500 HIV-infected pregnant women and their children.

Building Relationships That are More Than Skin Deep

"Skin is in" when it comes to drug delivery, and Dr. Bozena Michniak's lab is sought after by pharmaceutical companies to design and test ways to get medications through the body's largest organ safely and effectively. Transdermal patches, ointments, and even bioengineered skin are the focus of her work.

"When a company isn't certain whether a medication can be delivered through the skin, they come to us," says Dr. Michniak, associate professor, pharmacology and physiology, and director of the Laboratory for Drug Deliveries and Pharmaceutical Materials. One project involves a cream preparation for treating mild to moderate psoriasis. The drug had a large molecular weight, making it difficult to permeate the skin. By experimenting with pharmacological methods of drug preparation, a cream was developed, and is now in Phase II clinical trials.



Spinal Cord Injury Research Focuses on Sperm Function

For men who have had a spinal cord injury (SCI), there may be a double sense of loss. Many of them become infertile, and even when their partners are able to conceive, a full-term pregnancy occurs less than 5 percent of the time because of poor semen quality.

Dr. Hosea F. S. Huang (left), a research physiologist at the V.A. Medical Center, East Orange, and a research professor in the Department of Surgery at NJMS, is working to find answers to this problem. He was awarded a three-year, \$696,000 federal grant for "Preservation of Sperm Function After Spinal Cord Injury." He also received a \$192,053 basic science grant for "Impaired Spermatogenesis After Spinal Cord Injury" from The New Jersey Commission on Spinal Cord Research.

Outstanding Department Wins Research Award



Awards are most often bestowed on individuals who have made their mark. But at University Day this year, special recognition, in the form of Departmental Awards for Academic Excellence, was given to entire departments whose level of accomplishment was particularly noteworthy. The award for greatest improvement in departmental research was given to the Department of Biochemistry and Molecular Biology at NJMS. Dr. Michael Mathews (right, with student) is a professor and chair of the department. The awards recognize that excellence is achieved through the collaborative efforts of faculty, guided by strong departmental leadership. They are founded on the premise that scholarship is the vital core of the academic enterprise and that departments that encourage and develop faculty scholarship should be recognized for their accomplishments.

Dr. Mathews is also a past recipient of the Outstanding Research Award presented every other year by the Foundation of UMDNJ.

HIV-Infected Children Benefit From Combination Drug Therapy

As with HIV-infected adults, children and teens with the virus benefit from a medication regimen that includes protease inhibitors and standard AIDS therapies. "The first U.S. study to assess combination therapy, including protease inhibitors, on HIV-infected children, found mortality rates to be dramatically reduced," says Dr. James M. Oleske, professor of pediatrics at NJMS and senior researcher of the Pediatric AIDS Clinical Trials Group, a collaboration with the Harvard School of Public Health. The four-year study of 1,028 HIV-infected youth was published in the November 22, 2001 issue of *The New England Journal of Medicine*.

Smallpox Immunity Receives New Scrutiny

By the late 1970s, smallpox was considered eradicated worldwide, and the United States stopped routinely vaccinating against the disease in 1972. But today, with the increased possibility of the use of smallpox as a biological weapon, there is renewed research interest in the smallpox vaccine.

Thomas Denny, assistant professor of pathology and laboratory medicine and pediatrics, is evaluating long-lasting smallpox immunity to determine if immunized Americans are still protected against the disease.

NJMS 2002 Clinical Care

Innovative techniques and state-of-the-art technology are available to patients at the Newark campus. Whether treating an unusual condition or an everyday problem, the clinicians at New Jersey Medical School and its primary teaching facility, University Hospital, provide their patients with the best possible care.

“Surfing” Their Way to Weight Loss

Dr. Joseph Kamelgard, assistant professor of surgery at New Jersey Medical School and director of The Obesity Treatment Center (OTC) at The University Hospital, launched a Web site in April 2000 to spread the word about gastric bypass surgery and his program. Traffic to the OTC Web site averages 10,000 requests per month, making it the most heavily visited page on the University Hospital's website (www.TheUniversityHospital.com/OTC).

OTC is a procedure of last resort for the morbidly obese patient, someone who is 100 or more pounds overweight or has a body mass index (BMI) of 40 or more. During gastric bypass surgery, a small pouch is created at the top of the stomach, to which the small intestine is connected. With a smaller stomach, the patient feels “full” sooner, and by eating small amounts of food very slowly, reduces caloric intake. The average patient loses about two-thirds of the excess weight in one to one and a half years, and overall health is greatly improved.



When the Body's “Factory” Shuts Down



The hepatitis C virus (HCV), one of the most insidious and potentially deadly conditions to emerge on the public health radar screen, is transmitted by contaminated needles or blood. Chronic HCV, which affects 2.7 million Americans, has no known cure. It can lead to cirrhosis, a build-up of scar tissue in the liver, or hepatocellular carcinoma. Drug therapies are continually improving, and someday, an HCV vaccine could be developed. But for now, Dr. Baburao Koneru (center), associate professor of surgery at NJMS and chief of the Liver Transplant Program at

University Hospital, the only active transplant program in New Jersey, anticipates his team will be in high demand.

More than 500 liver transplants have been performed at University Hospital since the program's inception in 1989. Dr. Koneru has performed over 300 of them. The program's survival rates are 93.8 percent at one year post-transplant and 89.9 percent at three years, well above the national average.

High-Tech Imaging Improves the View

New Jersey Medical School is one of seven centers in the country using a powerful magnetic resonance imaging (MRI) scanner with a field strength of 3 Tesla. (Tesla is the measure of power of an MRI scanner.) The 3T scanner's ability to produce precise images of brain function and structure make it highly desirable for neuropsychological research. Clinically, physicians can use the scanner to pinpoint specific tumor locations and create thin-section imaging of minute structures such as the pituitary gland, the internal auditory canal, and the optic nerves.

The 3T scanner is housed in the University Heights Advanced Imaging Center, a collaborative venture of NJMS and Rutgers University-Newark that opened in September 2001. In December 2002, the Center's imaging capabilities were strengthened by the arrival of a PET CT unit. “The 3T and the PET CT will be in the same building, separated by a wall,” says Dr. Stephen R. Baker, professor and chair of radiology. “A patient will be able to come in and have his or her brain imaged by complementary techniques in one place.”



An Academic Medical Center's Commitment to Excellence

New Jersey Medical School's close proximity to The University Hospital (UH) allows for a close clinical collaboration between the two institutions. This cooperative relationship has been an essential ingredient in the success of NJMS as an academic medical center.

Medical students and residents are exposed to a wide array of patients at the school's primary teaching facility, including those with complex and unusual conditions. UH's 300 full-time attending physicians, many of them leaders in their fields, are faculty members of the New Jersey Medical School. Excellent teachers are the driving force of all educational institutions. The school's outstanding faculty, and the breadth of experience offered at UH, provide NJMS

students with a top-quality education.

In examining rooms and operating rooms at The University Hospital, NJMS students train for their future roles as physicians. To facilitate the clinical and educational collaboration between school and hospital, Dean Russell T. Joffe has executive oversight of UH and works closely with UH president and CEO Sidney E. Mitchell to strengthen this partnership.

Among the specialty services offered by UH are: a Level 1 Trauma Center (the only one in northern New Jersey), a regional center for neonatal intensive care, the Cochlear Implant Program, a neurosurgical intensive care unit and special Brain Tumor Program, and a federally designated spinal cord injury program.

Often described as the “safety net hospital” for the Greater Newark community, The University Hospital is the largest single provider of Medicaid and charity care in New Jersey.



Poison Control Hotline Operates 24/7 at NJMS

The mission of the New Jersey Poison Information and Education System (NJPIES) is to provide treatment and information concerning poisons, drugs, and targeted health issues via telephone, consultation, education and research. After years at another Essex County site, NJPIES came to the New Jersey Medical School campus in January 2002. The center operates 24 hours a day, seven days a week and receives about 100,000 calls each year from New Jersey residents and healthcare workers with questions. Poison information specialists, who are physicians, registered nurses, or pharmacists, handle all calls.

NJPIES and 64 other poison centers around the nation launched a new toll-free telephone number in January: 1-800-222-1222. The national hotline number connects the caller with the closest local poison facility. Dr. Steven Marcus, director of NJPIES and professor of preventive medicine and community health at NJMS, spearheaded this initiative in 1985. It has gathered support and resulted in federal legislation and funding.

Top Doctors in the New York Metro Area

Adolescent Medicine ■ Robert Johnson	Ophthalmology ■ Larry Frohman ■ Peter Hersh ■ Rudolph Wagner ■ Marco Zarbin
Allergy & Immunology ■ Leonard Bielory	Orthopaedic Surgery ■ Fred Behrens ■ Joseph Benevenia
Cardiac Electrophysiology ■ Joaquim Correia	Otolaryngology ■ Soly Baredes ■ Arie Rosen
Child & Adolescent Psychiatry ■ Jacqueline Bartlett	Pain Management ■ Wen-hsien Wu
Child Neurology ■ Jayoung Pak	Pediatric Endocrinology ■ Kathryn Skuza
Clinical Genetics ■ Franklin Desposito	Pediatric Pulmonology ■ Helen Aguila
Dermatology ■ Robert Schwartz	Pediatric Surgery ■ Colin Bethel
Family Practice ■ Mark S. Johnson	Physical Medicine and Rehabilitation ■ John Bach ■ Scott Nadler
Gastroenterology ■ Bruce Trotman	Psychiatry ■ Steven Schleifer
Infectious Diseases ■ Jerrold J. Ellner ■ Rajendra Kapila	Pulmonary Disease ■ Lee Reichman
Internal Medicine ■ Suzanne Atkin ■ Diana R. DeCosimo ■ Carroll M. Leevy	Radiation Oncology ■ Joy Anderson
Maternal & Fetal Medicine ■ Arlene Bardiguez-Brown	Radiology ■ Huey-Jen Lee
Medical Oncology ■ Stanley Weiss	Surgery ■ Edwin Deitch ■ Eric Muñoz ■ Suresh Raina ■ John Siegel
Neurological Surgery ■ Peter Carmel ■ Robert Heary	Thoracic Surgery ■ Paul J. P. Bolanowski
Neurology ■ Stuart Cook ■ David A. Marks	Urology ■ Robert Irwin
Obstetrics & Gynecology ■ Joseph Apuzzio ■ Jahir Sama ■ Gerson Weiss	Vascular Surgery ■ Robert Hobson ■ Frank Padberg

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Top Doctors in the New York Metro Area

New Jersey Medical School, a recipient of the prestigious Outstanding Community Service Award of the Association of American Medical Colleges, continues its commitment to the community.

Brotherhood is Powerful

If adolescence is like walking a tightrope, the teen years for minority males are the equivalent of walking the tightrope blindfolded and without a net. They are more likely to experiment with marijuana and have sex before age 13 than minority females and Caucasian males; have a 113 percent higher rate of serious suicide attempts than Caucasian males; and, twice as often as Caucasian males, carry a gun.

The Brotherhood Health Initiative, a program of the New Jersey Medical School's Division for Adolescent and Young Adult Medicine (DAYAM), creates a safety net for urban minority males by providing case management, peer support, advocacy, and transportation. "The program has been well received in its first year," says Dr. Robert L. Johnson, professor and interim chair of pediatrics (above with patient). Rather than allow these minority youths to slip through the cracks, pro-active case management supports them by assessing their needs for social services, following up on referrals and providing peer group sessions.



When Therapy Comes Out to Play

Children who usually are in wheelchairs or walkers reach new heights with Peak Potential, Inc., an adapted therapeutic indoor rock climbing program developed by Dr. JenFu Cheng when he was a third-year NJMS resident in physical medicine and rehabilitation. Strapped into full-body harnesses and connected to safety ropes, the kids spend one to two hours after school and evenings scaling the artificial heights at the New Jersey Rock Gym in Fairfield. Dr. Cheng's dream is to bring his newly converted band of adventurers to one of the phenomenally beautiful places his own rock climbing has taken him. "Disabled children shouldn't be deprived of the opportunity to experience nature," he says.

97 percent of the Class of 2002 participated in one or more community service activities.

FOCUS on a Growing Latino Community

FOCUS Community Health Center, a culturally sensitive, ambulatory care facility in downtown Newark staffed by bilingual New Jersey Medical School faculty, assists the almost 121,000 Latinos living in Essex County in obtaining quality health care. Its medical director is Dr. Debbie Salas-Lopez, assistant professor of medicine and a 1996 graduate of NJMS.

The Center, which opened in 1999, works with other programs to provide free Pap smears and mammographies to uninsured patients. It also has an initiative to increase the number of colorectal screenings given by primary care providers to underserved minorities.

The Latino Diabetes Center is one of FOCUS's largest programs, and for good reason. An estimated 2 million Latinos have type II diabetes, but only about half of them have been diagnosed. Through the Latino Diabetes Center, more than 600 Latinos have been screened for diabetes.



Community Service Spans the State

Each year, NJMS faculty are invited to serve on state boards because of their expertise and interest in a certain field. Dr. Debra Heller and Dr. Natalie Roche are shaping public policy and programs in two conditions that affect New Jersey's youngest residents: Sudden Infant Death Syndrome (SIDS) and Fetal Alcohol Syndrome (FAS).

Dr. Heller, a pediatric pathologist and professor, pathology and laboratory medicine, serves on the New Jersey State Sudden Child Death Autopsy Protocol Committee. A state law requires that possible SIDS deaths should be investigated using a standardized protocol, and that the parents of these infants are entitled to input by a pediatric pathologist. Dr. Heller is one of two pediatric pathologists involved with these consultations.

Fetal Alcohol Syndrome is the leading preventable cause of mental retardation, and Dr. Roche's role on the State of New Jersey Fetal Alcohol Syndrome Task Force focuses on education and prevention. New Jersey's FAS policies and programs have received national acclaim, and the task force is working to develop uniform diagnostic criteria.

Dr. Roche is assistant professor of obstetrics, gynecology, and women's health at NJMS.



Response to 9/11

NJMS faculty, staff, and students assisted in many ways following 9/11. Some rushed to triage centers, others went to Ground Zero.

Members of the Department of Psychiatry organized a training program in critical incident stress debriefing, a process that helps people address the after-effects of a disaster. Associates of the Center for BioDefense and UMDNJ's emergency medical services department provided coordination, command, and control of New Jersey's EMS units.

DONOR information

Faculty members from New Jersey Medical School lead some of the most exciting research programs in the country, studies that are advancing our understanding of the human body and how to treat disease. The Foundation of UMDNJ's goal is to provide these researchers with the funding they need to make breakthrough discoveries. The Foundation also helps provide the scholarship support necessary to attract the best and brightest medical students, the future physicians who will help establish New Jersey Medical School as one of the most respected medical schools in the country.

These are ambitious goals, but are they attainable? Roger Fine, vice president and general counsel for Johnson & Johnson, chairman of the Board for the Foundation of UMDNJ and a trustee of UMDNJ, says yes. "When you realize just how much New Jersey Medical School has accomplished since its founding in 1954, you understand that this is an institution that should not be underestimated," Mr. Fine commented. "The key to its growth and development over the next 10 to 20 years will be the partnerships that it builds with the corporate community, concerned citizens and its alumni base. The faculty and administrative talent are there; the challenge is to provide the resources needed for them to succeed."

To better accomplish these goals, the Foundation of UMDNJ recently restructured its operations. Early results have been very encouraging. Donors to the Foundation of UMDNJ have increased by 600 percent since restructuring efforts began in 2000, with most of the growth in the past year. New Jersey Medical School received almost \$6 million in gifts to benefit a wide range of projects in 2002, a number that Foundation leadership hopes to double in the coming years.

To learn more about the importance of philanthropy and how you can help, please contact the Foundation office at 973-972-4264. A complete list of donors to UMDNJ can be found at www.umdnj.edu/foundation.

BUILDING EXCELLENCE and new facilities at NJMS



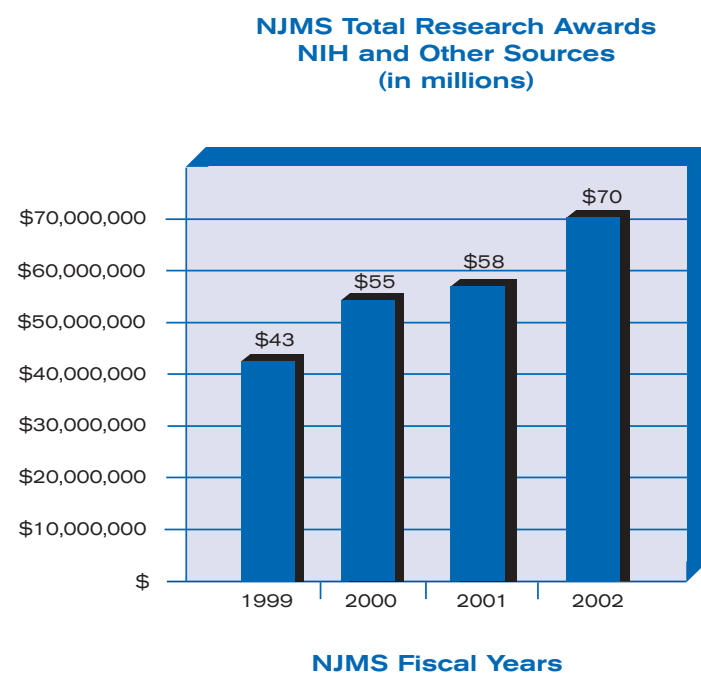
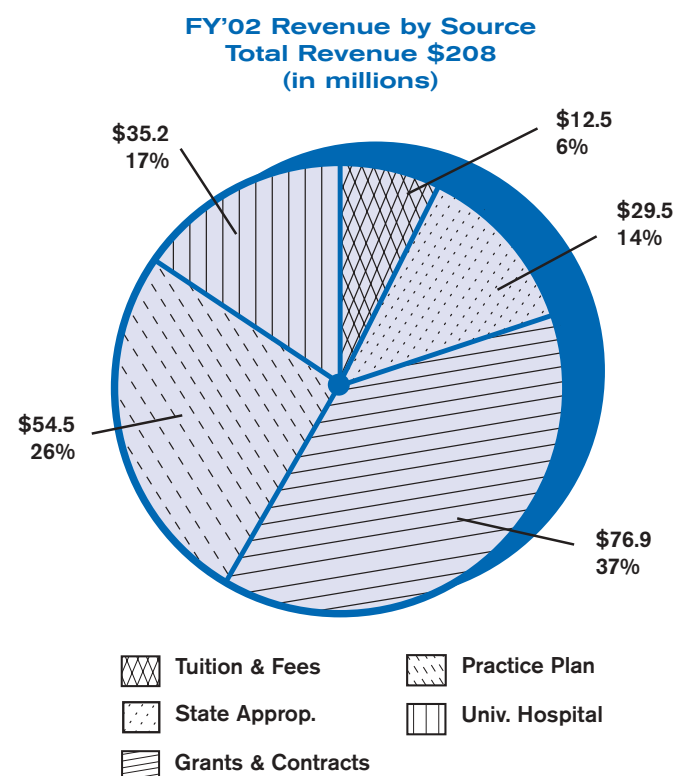
In December 1999, the UMDNJ Board of Trustees approved a capital program to build, expand, and renovate facilities at all of the University campuses. Some projects, such as the new International Center for Public Health, are complete, and groundbreaking has occurred on the \$100 million New Jersey Medical School-University Hospital Cancer Center.

In March 2002, the Neurological Institute of New Jersey Clinical Center opened. This 20,000-square-foot facility includes an outpatient center, faculty offices, and conference rooms for the clinical activities of the Institute. This year, the NJMS Department of Psychiatry and University Behavioral HealthCare relocated to the new Behavioral Health Sciences Building on the Newark campus, enhancing their partnership.

The Academic Medical Center will include a new 200,000 square foot hospital addition and research tower and a 180,000 square foot ambulatory care building. The George F. Smith Library will be expanded to include conference and student centers, and the Medical Science Building will gain new classroom and laboratory space.

This ambitious building program will help meet the educational, research, and clinical needs of NJMS.

FINANCIAL overview



NEW JERSEY MEDICAL SCHOOL administration and major partner hospital systems

Administration

Russell T. Joffe, MD, Dean

William E. Reichman, MD, Vice Dean

Sidney E. Mitchell, FACHE, President and Chief Executive Officer,
University Hospital

Harvey L. Ozer, MD, Senior Associate Dean for Research

Maria L. Soto-Greene, MD, Senior Associate Dean for Education

Stephen R. Baker, MD, Associate Dean, Graduate Medical Education

George F. Heinrich, MD, Associate Dean for Admissions

Deborah Johnson-Rothe, MD, Associate Dean for Clinical Enterprise

Linda Luciano, MBA, Associate Dean and Chief Operating Officer

Suresh Raina, MD, Associate Dean, Clinical Affairs, University Hospital

David L. Roe, MBA, Associate Dean and Chief Financial Officer

Robin Schroeder, MD, Associate Dean for Student Affairs

Alex Stagnaro-Green, MD, Associate Dean for Curriculum and

Faculty Development

Christopher Terrence, MD, Associate Dean for Veterans Affairs

Jane Fant, MS, Assistant Dean for Research

Jeffrey Wilusz, PhD, Assistant Dean, MD/PhD Program

Patrick J. Bower, MA, Director, Development

Sarah L. Karl, PhD, Director, Academic Development

Eva B. Ryden, DVM, PhD, Director, Research Animal Facility

Bernard M. Sarrel, MPA, Director, Facilities Planning and Management Services

Lawrence Wright, BA, Director, Students for Medicine and Dentistry Program
and Director for Recruitment

Julie Ferguson, MPA, NJMS Registrar

Dianne Mink, BA, NJMS Alumni Affairs

Harriette Waltner, Executive Assistant to the Dean

Major Partner Hospital Systems

University Hospital

P.O. Box 1709
150 Bergen Street
Newark, NJ 07101-1709

University Behavioral HealthCare

Newark Campus
P.O. Box 1709
183 South Orange Avenue
Newark, NJ 07101-1709

Department of Veterans Affairs

New Jersey Healthcare System
385 Tremont Avenue
East Orange, NJ 07018-1023

Atlantic Health System

325 Columbia Turnpike
Florham Park, NJ 07932-1213
■ Morristown Memorial Hospital
■ Overlook Hospital
■ Mountainside Hospital
■ The General Hospital Center at Passaic

Kessler Rehabilitation Corporation

300 Executive Drive
West Orange, NJ 07052-3327
■ Kessler Institute: East Orange
■ Kessler Institute: Saddle Brook
■ Kessler Institute: West Orange
■ Kessler Institute: Chester

Hackensack University Medical Center

30 Prospect Avenue
Hackensack, NJ 07601-1980

Basic Science Chairs

Stephen F. Vatner, MD, Cell Biology & Molecular Medicine
Michael B. Mathews, PhD, Biochemistry & Molecular Biology
Carol S. Newlon, PhD (Interim), Microbiology & Molecular Genetics
Andrew P. Thomas, PhD, Pharmacology & Physiology

Basic/Clinical Science Chairs

Patrick Pullicino, MD, PhD, Neurology & Neurosciences
Stanley Cohen, MD, Pathology & Laboratory Medicine
William E. Halperin, MD, DrPH, MPH, Preventive Medicine & Community Health

Clinical Science Chairs

Melissa L. Davidson, MD (Interim), Anesthesiology
Mark S. Johnson, MD, Family Medicine
Jerrold J. Ellner, MD, Medicine
Peter W. Carmel, MD, DMedSc, Neurological Surgery
Gerson Weiss, MD, Obstetrics, Gynecology and Women's Health
Marco A. Zarbin, MD, PhD, Ophthalmology & Visual Science
Fred F. Behrens, MD, Orthopaedics
Robert L. Johnson, MD (Interim), Pediatrics
Joel A. DeLisa, MD, MS, Physical Medicine & Rehabilitation
Charles H. Kellner, MD, Psychiatry
Stephen R. Baker, MD, Radiology
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Design:
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