

New  
Jersey  
Medical  
School

# pulse



**In the Hands  
of Our Liver  
Transplant Experts**  
.....  
**Surgeons Rebuild Limbs**  
.....  
**AIDS Drugs Come of Age**

**\$21 MILLION GRANT FOR BIODEFENSE**

**CME: DIABETIC RETINOPATHY • ALUMNI NEWS AND FEATURES**

Russell T. Joffe, MD

## Message from the Dean



**A**T NEW JERSEY MEDICAL SCHOOL, the start of the academic year was marked with impressive research news. Research funding at NJMS for the 2003 fiscal year exceeded an unprecedented \$88 million, representing a 27 percent increase over the previous year.

This latest news is part of an upward trend that NJMS has been experiencing for the last several years. Since 1996, research funding has increased more than twofold, exceeding the University's goal of doubling research dollars by 2005.

Our success continues. Extramural and clinical trial awards are on the rise, and are expected to surpass previous years. As the academic year presses on, our researchers are developing and receiving funding for innovative projects in the biomedical, clinical, behavioral and health services areas. Such efforts demonstrate the high levels of commitment and expertise that our faculty bring to NJMS every day.

Much of this work has vast implications. In October, we were awarded nearly \$21 million from the National Institutes of Health (NIH) to build a regional Biosafety Level 3 laboratory focused on researching diseases caused by agents of bioterrorism and newly emerging infectious diseases (see article on page 2). And while the construction of this state-of-the-art facility clearly benefits the local community in Newark, the resulting research will extend far beyond northern New Jersey.

As we prepare to celebrate our 50th anniversary in 2004, we are proud of all that has been accomplished at NJMS, and are excited by the prospects that our growing research capabilities hold for the future of medicine.

## NJMS Pulse

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OF NEW JERSEY  
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# fall 2003



## FEATURES

- 10 A New Liver, A New Life** by Mary Ann Littell  
A look at New Jersey's premier liver transplant program at University Hospital
- 14 Body Rebuilding** by Eve Jacobs  
Novel orthopaedic techniques for limb reconstruction
- 20 Pediatric AIDS Grows Up** by Maryann Bucknum Brinley  
Thanks to new medications, children with AIDS now live longer, more productive lives.

## DEPARTMENTS

### INSIDE INFORMATION

- 2** \$21 Million for Biodefense
- 3** Preventing Stroke with Cardiac Treatments
- 4** Top Docs at NJMS
- 5** Orthopaedics Department Builds Habitat House
- 5** *People* Features 2003 NJMS Grad
- 6** NJMS Art Show Draws Crowds
- 7** A Tradition Lives On
- 7** Urology Division Under New Leadership
- 8** Book Reviews
- 9** Dean Launches New Lecture Series

### CONTINUING MEDICAL EDUCATION

- 24 Preventing Visual Loss From Diabetic Retinopathy** by Monique Roy, MD

### VOICES

- 26 ECT is Back (It Never Really Left)** by Charles H. Kellner, MD  
Controversy over ECT aside, it remains the most effective treatment known for serious clinical depression.

### ALUMNI FOCUS

- 28** News of special interest to NJMS graduates

### ALUMNI PROFILE

- 32 Doctoring in a War Zone** by Mary Ann Littell  
Joseph Rubelowsky, MD'87, a heart surgeon and Army Reservist, tells about his recent tour of duty in Afghanistan

### END PAGE

- 40 Ellise Delphin's Tale of Two Cities** by Maryann Bucknum Brinley



For names and e-mail addresses of all NJMS experts who appear in this issue, see the inside back cover.



## \$21 Million for Biodefense

### NIH Award to Build Biosafety Laboratory for Biodefense Research in Newark

**N**EW JERSEY MEDICAL SCHOOL WILL RECEIVE ALMOST \$21 MILLION from the National Institutes of Health (NIH) to build a regional biocontainment laboratory (RBL) whose focus will be research on diseases caused by agents of bioterrorism and newly emerging infectious diseases, such as SARS and West Nile virus. The new labs, which will be built at the International Center for Public Health (ICPH), will be the third such facility in Newark.

Eleven biocontainment laboratories nationwide have been awarded construction grants, according to the National Institute of Allergy and Infectious Diseases at NIH. The exact amount of the grant is \$20,880,305.

Russell T. Joffe, MD, dean of NJMS and principal investigator on the grant, says, "Over the past two years, the medical school has been amassing a core of infectious disease and biodefense researchers. Adding a third Biosafety Level (BSL) 3 laboratory to our resources will certainly help us attain a level of world-class research excellence."

This announcement follows NIAID's designation of eight Regional Centers of Excellence (RCE) for Biodefense and Emerging Infectious Disease Research, including the Northeast Biodefense Center, whose membership spans institutions in New Jersey, New York, Connecticut, Massachusetts and Puerto Rico. Both

**"Adding a third Biosafety Level 3 laboratory to our resources will certainly help us attain a level of world-class research excellence." Russell T. Joffe, MD**



NJMS and the Public Health Research Institute (PHRI), which share space in the ICPH, are members of this consortium. The NJMS Department of Microbiology and Molecular Genetics and National Tuberculosis Center are also housed

at ICPH, which is a state-of-the-art facility for advanced infectious disease research.

"When we built ICPH and brought UMDNJ and PHRI scientists together, our intent was to establish a symbiotic relationship between leading scientists that would attract large federal grants and establish Newark as a major focal point of infectious disease research," says Stuart D. Cook, MD, UMDNJ president.

The ICPH already contains a 7,500 square foot BSL 3 and animal facility. NJMS also operates a 1,000 square foot BSL 3 laboratory, the centerpiece of its Center for Emerging Pathogens, in the Medical Sciences Building. The new biocontainment facility at ICPH, designed as a stand-alone facility, will add an additional 13,000 square feet of space.

The current five principal investigators pursuing select agent studies will serve as the nucleus for recruiting five to seven new scientists with related interests in biodefense. The RBL will also house at least two visiting RCE scientists and will support research of commuting RCE scientists for the region, more than 50 percent of whom work within 20 miles of the Newark campus.

Nancy Connell, PhD, director of the Center for BioDefense at UMDNJ and vice chair for research in the NJMS Department of Medicine, says, "We are proud to have been selected as one of the sites in this new national effort for rapid development of the scientific knowledge required for more effective therapies, diagnostics and vaccines to meet the infectious disease threats facing the nation and the world." The Center for BioDefense was established three years ago and has received more than \$12.6 million in federal appropriations to develop studies of biological agents that have potential to be used in bioterrorism attacks. ●



Nancy Connell, PhD

# Physicians Apply Cardiac Treatments to the Brain to Prevent Stroke

**N**EURO-INTERVENTIONALISTS AT THE ACUTE STROKE CENTER at University Hospital have treated two stroke patients with innovative procedures that were developed for use in the heart. In one case, the team used the new drug-eluting cardiac stent to prevent a reblockage in the vertebral artery of a 57-year-old man. The second case involved the use of an embolic protection device, or a micro-filter, to capture floating debris resulting from angioplasty in a 69-year-old man.

The use of these cardiac techniques in the brain, believed to be one of the first of their kind, was based upon the understanding that plaque build-up in the brain occurs in much the same way as in the heart. Conventional treatment of cerebral blockage is similar to that used for coronary blockage but recent advances in coronary angioplasty and

stenting had not been applied to the brain.

In the first case, the patient had suffered a transient ischemic attack (TIA). “This can be a serious event by itself, but I was particularly concerned that this blockage would cause a catastrophic stroke in the brain stem. Therefore, rapid and highly specialized treatment was essential,” explained Adnan Qureshi, MD, Director of the Cerebrovascular Program at University Hospital, and leader of the endovascular team that performed the procedure.

Physicians typically use stents to hold open blockages in both the vessels of the heart and brain. “However, in the brain, as in the heart, we tend to see restenosis and the need for another revascularization procedure,” says Qureshi, who is also a professor of neurology and neurosciences at NJMS.

**“It’s both exciting and encouraging when you—as a physician—can apply the technology available and truly make a positive impact on the life of your patient.”**

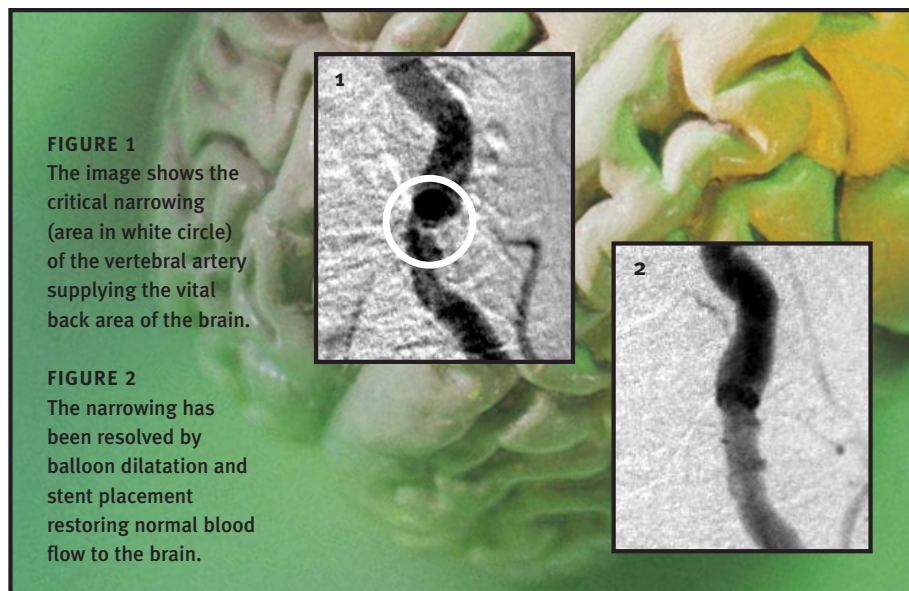
**Adnan Qureshi, MD**

To combat this and prevent the need for additional angioplasty or open heart surgery, interventional cardiologists have recently begun using a drug eluting stent. Qureshi and his endovascular team decided to apply the same principle for their patient in what is believed to be one of the first applications of the drug-eluting stent in the vessels of the brain.

The Cypher stent, manufactured by Cordis, a Johnson and Johnson company, is covered with Sirolimus, which impedes the growth of the scar tissue. “For several reasons this patient was a good candidate for the stent,” says Qureshi. “He was at extremely high risk for a more serious stroke, but did not respond to medications. Moreover there were some anatomical anomalies that necessitated the opening of this specific vessel. This particular patient had only one vertebral artery. We felt that using the Cypher would reduce the likelihood for future surgeries down the line.”

In the second case, a patient needed angioplasty to open a blockage in the

*continued on page 9*



**FIGURE 1**  
The image shows the critical narrowing (area in white circle) of the vertebral artery supplying the vital back area of the brain.

**FIGURE 2**  
The narrowing has been resolved by balloon dilatation and stent placement restoring normal blood flow to the brain.



# The Best Docs

**WHO ARE THE BEST DOCTORS** in the New York metropolitan area? Certainly many of them hang their hats right here at New Jersey Medical School and University Hospital. But let it not be said that we conferred this distinction upon ourselves. *New Jersey Monthly* and *New York* magazines, as well as Castle Connolly, have bestowed the accolades. ●



### The 20 UH/NJMS physicians on *New Jersey Monthly's* list of "Top Doctors 2003"

- Cardiac Electrophysiology*  
Joaquim Correia
- Otolaryngology*  
Jed Kwartler
- Clinical Genetics*  
Franklin Desposito
- Pediatric Surgery*  
Colin Bethel
- Infectious Diseases*  
Jerrold J. Ellner
- Physical Medicine and Rehabilitation*  
John Bach
- Maternal and Fetal Medicine*  
Arlene Bardeguez-Brown
- Preventive Medicine*  
Stanley Weiss
- Neurological Surgery*  
Peter Carmel
- Psychiatry*  
Steven Schleifer
- Neurology*  
Stuart D. Cook
- Pulmonary Disease*  
Lee Reichman
- Obstetrics and Gynecology*  
Joseph Apuzzio
- Reproductive Endocrinology*  
Gerson Weiss
- Ophthalmology*  
Peter Hersch
- Surgery*  
Edwin A. Deitch
- Orthopaedic Surgery*  
Joseph Benevenia
- Urology*  
Robert Irwin
- Hossein Sadeghi Nejad

### *Vascular Surgery* Robert Hobson

### The 14 UH/NJMS physicians in 14 specialty areas named BEST DOCS by *New York* magazine (June 16, 2003)

- Clinical Genetics*  
Franklin Desposito
- Orthopaedic Surgery*  
Joseph Benevenia
- Infectious Disease*  
Jerrold J. Ellner
- Physical Medicine and Rehabilitation*  
John Bach
- Maternal and Fetal Medicine*  
Arlene Bardeguez-Brown
- Psychiatry*  
Steven Schleifer
- Neurological Surgery*  
Peter Carmel
- Pulmonary Disease*  
Lee Reichman
- Neurology*  
Stuart D. Cook
- Reproductive Endocrinology*  
Gerson Weiss
- Obstetrics and Gynecology*  
Joseph Apuzzio
- Surgery*  
Edwin A. Deitch
- Ophthalmology*  
Peter Hersch
- Urology*  
Robert Irwin
- The 13 NJMS/UH physicians named as "America's Top Doctors" in the third edition of the *Castle Connolly Guide***
- Clinical Genetics*  
Franklin Desposito

- Ophthalmology*  
Peter Hersch
- Infectious Disease*  
Jerrold J. Ellner
- Orthopaedic Surgery*  
Joseph Benevenia
- Maternal and Fetal Medicine*  
Arlene Bardeguez-Brown
- Physical Medicine and Rehabilitation*  
John Bach
- Neurology*  
Stuart D. Cook
- Preventive Medicine*  
Stanley Weiss
- Neurosurgery*  
Peter Carmel
- Pulmonary Medicine*  
Lee Reichman
- Obstetrics and Gynecology*  
Gerson Weiss
- Surgery*  
Edwin A. Deitch
- Vascular Surgery*  
Robert Hobson

### The 49 UH/NJMS physicians named as TOP DOCTORS by Castle Connolly's TOP DOCTORS IN THE NEW YORK METRO AREA (Seventh edition 2003)

- Adolescent Medicine*  
Robert Johnson
- Ophthalmology*  
Larry Frohman, Peter Hersch, Paul Langer, Rudolph Wagner, Marco Zarbin
- Allergy and Immunology*  
Leonard Bielory
- Orthopaedic Surgery*  
Fred Behrens, Joseph Benevenia

- Cardiac Electrophysiology*  
Joaquim Correia
- Otolaryngology*  
Soly Baredes, Jed Kwartler, Arie Rosen
- Child and Adolescent Psychiatry*  
Jacqueline Bartlett
- Pain Management*  
Wen-Hsien Wu
- Child Neurology*  
Jayoung Pak
- Pediatric Pulmonology*  
Helen Aguila
- Clinical Genetics*  
Franklin Desposito
- Pediatric Surgery*  
Colin Bethel
- Dermatology*  
Robert Schwartz
- Physical Medicine and Rehabilitation*  
John Bach, Scott Nadler
- Family Practice*  
Mark S. Johnson
- Preventive Medicine*  
Stanley Weiss
- Infectious Diseases*  
Jerrold J. Ellner, Rajendra Kapila
- Psychiatry*  
Steven Schleifer
- Internal Medicine*  
Suzanne Atkin, Diana R. Decosimo, Carroll M. Leevy
- Pulmonary Disease*  
Lee Reichman
- Maternal and Fetal Medicine*  
Arlene Bardeguez-Brown
- Radiology*  
Hueyjen Lee
- Neurological Surgery*  
Peter Carmel, Robert Heary, Michael Schulder
- Surgery*  
Edwin A. Deitch, Eric Munoz, Suresh Raina, John Siegel
- Neurology*  
Stuart D. Cook, David A. Marks
- Thoracic Surgery*  
Paul J. P. Bolanowski
- Obstetrics and Gynecology*  
Joseph Apuzzio, Gerson Weiss
- Urology*  
Robert Irwin, Hossein Sadeghi Nejad
- Vascular Surgery*  
Robert Hobson, Frank Padberg

# Orthopaedics Department Builds Habitat House

**T**HE ORTHOPAEDICS DEPARTMENT AT NEW JERSEY MEDICAL SCHOOL (NJMS) are experts in construction—reconstructing limbs, that is. Now, however, they are involved in construction of another sort. They have teamed with Habitat for Humanity to build a house in Newark.

Habitat, a nonprofit organization, aims to eliminate homelessness by providing decent shelter to those who need it. Homes are built through volunteer labor, with donations of money and materials, sold to families at no profit, and financed with no-interest loans.



Orthopaedics chair Fred Behrens, MD, had long been a supporter of Habitat, sending donations periodically. But he always wanted to do more. When he learned that Habitat was constructing homes in Newark, he and a few colleagues volunteered their services.

The experience was so rewarding that they decided to sponsor a house.

Sponsor organizations must raise \$80,000 and volunteer their time in helping to construct the house. “We teach volunteers how to do everything, from running a circular saw to installing wallboard,” says Jim Tierney, executive director of Habitat–Newark. There are currently 50 Habitat homes in Newark, all located in a three-square-block area right near UMDNJ’s Newark campus. The orthopaedics house is the 51st.

Thus far the department has raised \$70,000. Habitat in turn puts up \$40,000. All Habitat homeowners must contribute at least 400 volunteer hours of construction, but they do not have to make a down payment. Habitat holds the mortgage on the new home.

Anyone in the University community who is interested in contributing or volunteering at the orthopaedics house should contact Abby Schwalb at 973-972-3860 or [a.schwalb@umdnj.edu](mailto:a.schwalb@umdnj.edu).

For more information or to schedule a work day, call Jim Tierney or Jean Bell at Habitat–Newark: 973-624-3330. ●

## People Features 2003 NJMS Grad

**W**OOSIK CHUNG, MD (NJMS '03), IS STUDYING SURGERY—more than 24 years after a terrible accident. In 1978, the then 3-year-old reached into the whirring engine of a tractor and severed his hands. His father, a surgeon, and mother, a nurse, rushed him to a hospital. Though his father had never attempted this type of surgery before, he re-attached his son’s hands. Chung’s grandfather, a martial arts expert, later taught him Tai Kwon Do as a unique approach to rehabilitation. The youngster mastered the techniques so well that he qualified for the U.S. national Tae Kwon Do team. However, he chose medical school instead. Currently a resident in orthopaedic surgery at Columbia University Presbyterian Hospital, the physician recently appeared on the TV program “Good Morning America.” ●





# NJMS Art Show Draws Crowds

Last May more than 100 participants, including faculty, staff, students and individuals from the local community, displayed artwork at the annual New Jersey Medical School Spring Arts Festival. For those who missed it, we offer a bird’s-eye view of some “pictures” from the exhibition and the faculty members behind the art.

**JACOB LINDENTHAL, PHD, DRPH**, professor in the Department of Psychiatry, remembers the first photograph he took. He was very young at the time and it was the standard “family shot” of his sister and brother, but his love for photography has remained with him through the years. As a Spring Arts Festival committee member, Lindenthal recognizes how the event benefits NJMS by integrating the school with the surrounding community, raising morale, allowing fellow artists to learn from one another and inspiring faculty and students to pursue art activities. He recently switched from print to digital photography and is reaping the benefits of this fairly new medium.

“Kodak used to say in their advertising, ‘You push the button, we do the rest.’ Now with the advent of digital photography and photo correcting software, ‘You push the button, you do the rest,’” he says.



*Garden in Newport, Rhode Island*

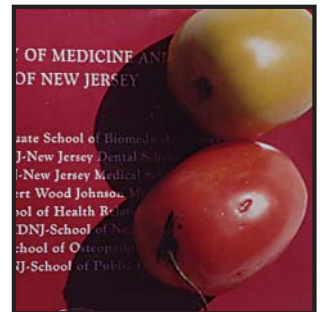
*I’m a Star (right),  
Dresden my Best (below)*



**DEBORAH HELLER, MD**, associate director of the Division of Anatomic Pathology at University

Hospital and NJMS professor of pathology and laboratory medicine, has been an avid quilter for only three years. But judging by the vibrant, creative quilts that she displayed during the Spring Arts Festival, you would think she’s been quilting her entire life. Her two entries, “I’m a Star,” and “Dresden my Best,” exemplify her mastery of her craft. “I’ve read that quilting is like practicing yoga,” Heller explains. “It’s wonderful for stress management.” Heller compares her attraction to quilting to her line of work since in both quilting and pathology she is trained to determine pattern recognition.

**S.C. JOSEPH FU, PHD**, professor (emeritus) of biochemistry/ molecular biology and ophthalmology, has taught at NJMS since 1971. During his teaching and research career, Fu has photographed many exotic places in Asia and Europe. His creativity is shown at right in his photo submission for the arts festival of Jersey tomatoes displayed with New Jersey Medical School printed materials. “As you know, the Jersey tomato is recognized as one of the best tasting tomatoes, often called world famous,” explains Fu. “The secret is that Jersey tomatoes are vine ripened and picked a few days after they turn red.” What is the correlation between NJMS and tomatoes? “Our medical school excels in education, research and patient care. Although it sometimes goes unnoticed—like the Jersey tomato—it gives us a lot to be proud about.” ●



*Detail of Jersey Tomatoes*



## A Tradition Lives On

**T**HIS YEAR, 170 NEW STUDENTS were welcomed to New Jersey Medical School during the White Coat Ceremony. An annual event in which students receive their first white coats and recite the Hippocratic Oath, it has been an NJMS tradition for the last decade. Designed to help foster an environment for students that encourages professionalism and empathy in medicine, the ceremony is sponsored by the Arnold P. Gold Foundation.

“It is important that we recite the Hippocratic Oath now, for it is during medical school that students receive their medical orientation,” said Arnold P. Gold, MD, president of the foundation and professor of neurology and pediatrics at Columbia University. NJMS was the second school in the U.S. to institute the ceremony. This year, 130 institutions began the academic year with the ceremonial donning of white coats.

Russell T. Joffe, MD, dean, offered some advice to the Class of 2007. “Learn to understand and practice the art of medicine and the importance of humanism in medicine,” he said. “The most sought after doctors are those who are highly competent—and compassionate.”

For the first time, a majority of NJMS’s first-year students (51 percent) are female. This year also was the first in six years that the school experienced an increase in the applicant pool. NJMS received 2,934 applications—a 20 percent increase over the previous year. This surge mirrors a national trend, according to the American Association of Medical Colleges.

In terms of incoming students, the Class of 2007 includes: 30 students from Rutgers-New Brunswick; nine from NYU; seven from Cornell; six from University of Pennsylvania; five from Johns Hopkins and Columbia; and 13 from The College of New Jersey. ●



## Urology Division Under New Leadership

**T**HE NJMS UROLOGY DIVISION under a new chief, Mark L.

Jordan, MD, is expanding in all directions: research, faculty, patient services, academics. Even the clang of construction on South Orange Avenue is part of this growth. The new ambulatory care building will house 9,000 square feet of offices and outpatient areas. More than a million dollars worth of equipment has been purchased for the operating room and a lab for basic research is being renovated for the cutting edge science Jordan conducts in transplant immunology and cancer biology.



Arriving on campus in July from the University of Pittsburgh, where he was interim chief of urologic surgery, a tenured professor and director of the renal transplant division at the University of Pittsburgh Medical Center and Veterans Administration Medical Center, Jordan has brought more than \$700,000 in research grant funds with him, as well as his excitement about “the challenge of leading the development of this division into several areas including prostate cancer, urological oncology, and minimally invasive urology.” Four new faculty members, as well as a team of administrators, have joined him, and more will follow.

Jordan has three primary research areas: mechanisms of allograft rejection, cytokine and cellular mechanisms of donor specific hyporeactivity, and immunologic therapy for prostate cancer. A graduate of the University of Toronto Medical School, he completed fellowships at the Cleveland Clinic and at the University of Minnesota. “Our program here in Newark will focus on immunology research as well as on building research and clinical programs in urologic oncology,” he says. ●

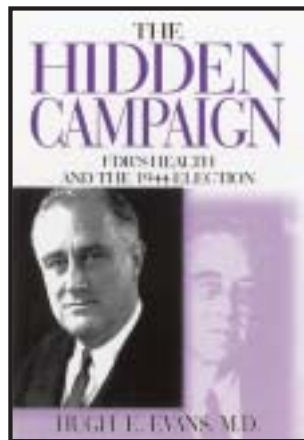


# Book Reviews

## *The Hidden Campaign: FDR's Health and the 1944 Election*

by Hugh E. Evans, MD  
M.E. Sharpe, Inc.

**AS GOVERNMENT COVER-UPS GO**, this particular one—the suppression of our 32nd president's declining health during a pivotal presidential election—is right up there. In *The Hidden Campaign: FDR's Health and the 1944 Election*, Hugh E. Evans, MD, presents his investigations into the fatal illness of Franklin Delano Roosevelt that was hidden not only from the nation at large, but from some of his closest advisors.



Evans examines the ethics of FDR's decision to run for a fourth term, knowing how sick he was, and how the pressures of wartime politics affected his decision. The author draws upon the medical notes of FDR's physicians, oral histories, personal interviews and other scholarly research.

Evans is a professor of pediatrics, and professor of preventive medicine and community health, at New Jersey Medical School, and has published 130 papers in peer-reviewed journals.

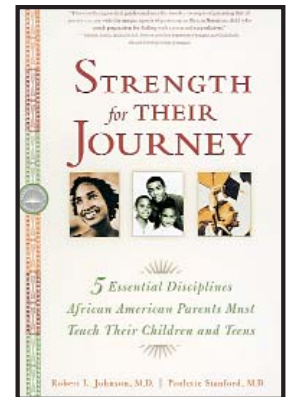
## *Strength for Their Journey: Five Essential Disciplines African-American Parents Must Teach Their Children and Teens*

Robert L. Johnson, MD, FAAP, and Paulette Stanford, MD  
Broadway Books

**THE RESULT OF MORE THAN 20 YEARS** of collaborative work by Robert L. Johnson, MD, and Paulette Stanford, MD, this guide focuses on successful parenting and the social challenges African-American children and their parents face each day. It offers insights into five interconnected disciplines the authors think are essential to growing up as an African-American in the U.S. today, and seeks to inspire African-American youths

to have pride in their heritage, help them deal with prejudice and racial profiling and fortify themselves against violence, substance abuse and unsafe sex. Parents are advised how to help children develop financial responsibility and career skills.

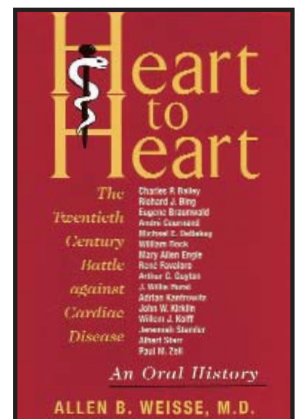
Johnson is professor and interim chair in the Department of Pediatrics, and professor of psychiatry at NJMS. Stanford is an assistant professor of clinical pediatrics, and medical director of START, an adolescent HIV program at NJMS. She is also the principal investigator for an NIH research study on high-risk adolescent behavior.



## *Heart to Heart: The Twentieth Century Battle Against Cardiac Disease*

Allen B. Weisse, MD  
Rutgers University Press

**THE TWENTIETH CENTURY WAS A REMARKABLE TIME** of medical research productivity and progress in the treatment of heart disease. In *Heart to Heart*, Allen B. Weisse, MD, talks with 16 pioneering physicians about their challenges and triumphs in conquering a disease that affects millions worldwide. Included are their recollections of the people and events that influenced them, their motivations, problems, interactions with their contemporaries, and hopes for the future. Not every doctor who has made important contributions to the treatment and prevention of heart disease could be interviewed for this volume, so Weisse includes a biographical section listing other prominent cardiologists and surgeons as well as a list of recommended reading.



Weisse is a clinical professor of medicine at New Jersey Medical School, where he has been on the faculty for more than three decades. He is also the author of *Medicine: State of the Art*, the award-winning *Conversations in Medicine*, *The Staff and the Serpent: Pertinent and Impertinent Observations on the World of Medicine*, and *Medical Odysseys*. ●

# Stroke

continued from page 3

cerebral artery. The endovascular team was concerned about the potential for emboli to be dislodged during the angioplasty. The patient had already experienced multiple ischemic strokes resulting from debris released from the blockage.

Cardiologists face the same problem during cardiac angioplasty. To capture the debris, they use an embolic protection device. Qureshi and his team applied embolic protection during the angioplasty.

Working through a small incision in the patient's groin, the physician maneuvers a thin, hollow tube (about .014 of an inch in diameter) into the blocked artery. The tube carries a filter at its tip that is deployed to catch the floating debris. "It helps to think of an

embolic protection device as a tiny fishing net that is opened inside the artery," Qureshi says. "We insert the catheter for the angioplasty and stenting to compress the plaque, and the net catches the floating microscopic debris."

Once the angioplasty is completed, the net-like filter is then retracted and removed from the body with the caught debris inside.

"I would say both cases were very successful," says Qureshi. "It's both exciting and encouraging when you—as a physician—can apply the technology available and truly make a positive impact on the life of your patient."

Qureshi recently championed the establishment of the Cerebrovascular Research Group (CVRG) led by Afshin Divani, PhD. The CVRG will perform

cutting-edge stroke research, such as working with the drug-eluted stent and the embolic protection device previously mentioned, at NJMS.

"CVRG will conduct epidemiological studies to better understand the primary and secondary risk factors of stroke within individual communities in order to increase the efficacy of educational outreach programs on stroke," says Divani. "We're also involved in conducting both *in vitro* and pre-clinical studies pertaining to new pharmaceuticals and medical device options for treating cerebrovascular diseases. It is exciting to be involved with developing new treatment options for stroke that will be available a few years down the road to the general medical community." ●

## Dean Launches New Lecture Series

**A** N ANNUAL FORUM ENCOURAGING CONVERSATION between NJMS students, faculty and healthcare leaders on pressing issues in medicine was launched in October by Dean Russell T. Joffe, MD. Harvey Fineberg, MD, MPA, PhD, president of the Institute of Medicine and past provost of Harvard University, was the inaugural speaker for the first Dean's Distinguished Lecture Series.

An expert on health policy and medical decision-making, Fineberg explored how a variety of forces in healthcare affect quality levels and create a "quality chasm." Among those forces are the growing prevalence of chronic and emerging diseases, legal and regulatory pressures and persistent shortage of personnel.

Despite recognition that healthcare needs to be patient-centered, safe, effective, timely and equitable, Fineberg said that on a national level, "there are still large gaps between the care people should receive and the care people do receive." One key to closing this gap is by better educating all healthcare professionals about the complex structure of the U.S. healthcare system. "We cannot solve the problem unless we have a clearer understanding of the system," he said.

Later in the day, Fineberg hosted a dialogue with faculty and students on how to change health professions education to improve the quality of patient care. In speaking of curriculum development, a process that NJMS is currently undergoing, he advocated that clinical education initiatives and experiences become an essential part of all healthcare training. "As educators and role models, we have an incredible opportunity to make a difference and positively impact patient care for years to come," he said. ●



# A NEW LIVER, A NEW LIFE



(Left to right) The transplant surgeons: Andrew delaTorre, MD, Baburao Koneru, MD, Dorian Wilson, MD, and Adrian Fisher, MD

BY MARY ANN LITTELL

In 1989, Karlynn Brown, a high school junior from Jersey City, went to the school nurse complaining of fatigue, fever and dizziness. She had felt ill for days, and was wearing tinted glasses so no one would see how yellow her eyes were. But the nurse wasn't fooled. She advised the teenager to see a physician immediately: "And don't come back to school until you do."

For Brown, thus began an odyssey that took her first to her pediatrician, next to a hepatologist, then to St. Francis Hospital in Jersey City, and finally to University Hospital in Newark, where she ultimately underwent three liver transplants. Today, she is a healthy 30 year old, newly married, with a master's degree in social work and a rewarding job counseling middle-school students.

The road back to good health was a long one for Brown. She didn't know it at the time, but she was a pioneer, one of the first patients to receive a liver transplant at University Hospital (UH) in Newark. The program was launched in 1989 under the direction of Baburao Koneru, MD, and that year, 15 transplants were performed. Since then, the surgical team has performed more than 700 liver transplants, and the program has grown to be the 12th largest adult liver program in the nation (based on 2002 figures from the United Network for Organ Sharing, or UNOS).

"We're the first and largest liver transplant program in the state," says Koneru, who is also an associate professor of surgery at New Jersey Medical School (NJMS). The other program in New Jersey, a relatively new one at Our Lady of Lourdes Medical Center in Camden, has performed 14 transplants to date over the last three years.



The UH liver transplant program takes a team approach to provide comprehensive care to patients before, during and after the surgery. The team includes four surgeons (Koneru, Adrian Fisher, MD, Dorian Wilson, MD, and Andrew delaTorre, MD), hepatologists, a psychiatrist specially trained in transplant issues, physician assistants, nurse coordinators, social workers, nurse-practitioners, financial coordinators and nutritionists.

## LONG WAITS FOR ORGANS

The demand for livers has grown tremendously, as new therapies have improved the health and increased the lifespan of people with a wide range of ailments, like hepatitis C, cirrhosis, and autoimmune diseases. According to UNOS, there are currently 17,313 people on the liver transplant waiting list nationwide, and more than 80,000 on the list for all organs. Some 6,000 people die nationwide each year while waiting for organs. Donor organizations attribute this paucity to not enough people filling out donor cards or discussing with their families their wish to donate organs.

Only about 4,500 cadaver donor livers become available each year, and that number has been holding steady. The shortage has given rise to living-donor surgery, where a portion of the liver, either the right or left lobe, depending on the age and body size of the recipient, is surgically removed from a healthy donor and transplanted. While there are many success stories about living-donor transplantation, the death in a New York City hospital last year of a healthy 57 year old man who was donating a portion of his liver to his brother has prompted a reevaluation of the procedure.

New York state, with a population of 18 million, has 1,500 residents on the liver transplant waiting list. In contrast, there are 8 million people in New Jersey, and 150 to 175 New Jerseyans on the list. You don't have to be a gambler to recognize which state offers better odds.

"University Hospital has the shortest waiting list in the tri-state area," says Arun Samanta, MD, professor of surgery at NJMS, medical director of the liver transplant program and chief of transplant hepatology. "That's a



Arun Samanta, MD

good reason to come here, but the best reason is our excellent outcomes."

Among the top 15 liver transplant programs in the U.S., UH boasts patient survival rates of 93.8 percent after one year, and 90 percent after three years. Graft survival rates are 86.6 percent after one year, and 81.2 percent after three years. These survival rates, based on UNOS data for 2001, are the third highest of any center in the nation.

## SURGEONS AT WORK

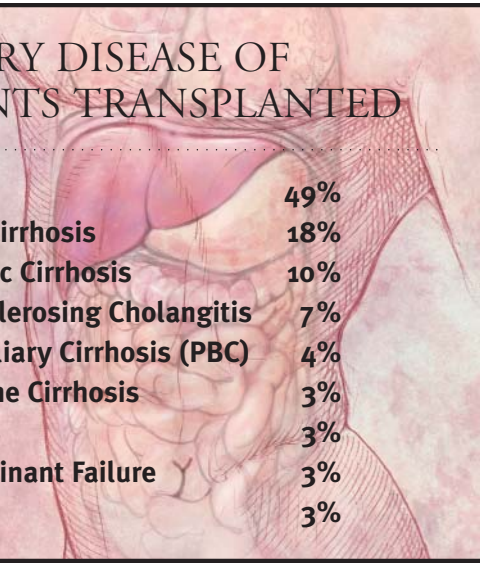
The nation's transplant waiting list is organized into 11 regions. When an organ becomes available, it is first offered to recipients in that region. If there are no takers, for reasons ranging from acute illness to failure to match blood types, the organ may be offered to patients in other regions. However, timing is everything: Once an organ is recovered, it must be transplanted quickly, so it's not feasible to transport it long distances.

Transplant surgeons perform a dual role, both recovering donor organs and performing transplant surgery. Koneru estimates that at UH, 90 to 95 percent of the transplanted livers are from cadavers in New Jersey. When a liver becomes available, the team travels to the donor site—often another medical center in the state—to remove it, then brings it back to UH, where there is usually a patient waiting. In 5 to 10 percent of cases, high-priority patients (those with sudden onset of liver failure) will sometimes receive organs from out of state.

In general, a donated organ goes to a single individual, but occasionally, it is divided and given to two or more recipients. Recently, Koneru and his team traveled to south Jersey to remove a 12-kilogram liver from an adult donor with the intention of dividing it in two. A critically ill child in Philadelphia had been assigned the organ. The plan was to give the smaller lobe on the left side to the child, and the remainder of the organ to an adult recipient at UH. Unfortunately, the small segment proved to be too large for the child, so the entire liver was transplanted into the adult recipient at UH.

Priority on the liver transplant list is based on a Model of End Stage Liver Disease (MELD) score. This score assesses the disease severity and is predictive of risk of dying from the underlying liver disease over a period of time. MELD is a numeric score that incorporates three criteria in its calculation: degree of jaundice, kidney function, and clotting ability. "A patient can have severe fluid retention, or have had an episode of vomiting blood or may be experiencing varying degrees of drowsiness from chronic liver diseases, but those factors don't

## PRIMARY DISEASE OF PATIENTS TRANSPLANTED



<b>Hepatitis C</b>	<b>49%</b>
<b>Alcoholic Cirrhosis</b>	<b>18%</b>
<b>Cryptogenic Cirrhosis</b>	<b>10%</b>
<b>Primary Sclerosing Cholangitis</b>	<b>7%</b>
<b>Primary Biliary Cirrhosis (PBC)</b>	<b>4%</b>
<b>Autoimmune Cirrhosis</b>	<b>3%</b>
<b>Hepatitis B</b>	<b>3%</b>
<b>Acute Fulminant Failure</b>	<b>3%</b>
<b>Other</b>	<b>3%</b>

determine the priority,” says Samanta. The numerical rating also helps to ensure uniform standards for all centers in evaluating seriousness of disease and prioritizing allocation of livers.

### PHASES OF CARE... BEFORE, DURING AND AFTER

Samanta emphasizes the importance of three phases of medical care for transplant patients: pre-transplant evaluation, health maintenance support while on the waiting list, and post-surgical care.

Patients referred to the UH program are first examined to determine whether they are transplant candidates. Their workup includes evaluations by transplant hepatologists, cardiologists, transplant surgeons, social workers, a psychiatrist specially trained in transplant issues and nutritionists. Comorbid illnesses like hypertension, kidney disease and diabetes are also assessed. Contraindications that would seriously compromise the possibility of a transplant include poor cardiopulmonary status and nutritional debilitation. “An important part of the process is to get patients in the best possible health prior to surgery and carefully monitoring and optimizing their care while on the waiting list,” says Samanta.

The psychiatric examination is mandatory, and its aim is to provide support for stressed patients and to evaluate any alcohol and/or drug abuse. Excessive alcohol and drug use, and concurrent high-risk behaviors like needle-sharing, are primary factors in hepatitis C infection, the most common diagnosis for liver transplantation. Patients with alcohol- or drug-related illness must pledge to give up these substances completely and are required to sign a sobriety form. Their names will not go on the waiting list until they have completed a six-month period of abstinence.

“Facing your own mortality is a difficult thing to absorb,” says Cheryl Kennedy, MD, associate professor of psychiatry at NJMS, who conducts psychiatric evaluations as part of the

transplant team. “Sleep is disturbed, appetite suppressed, and patients are often depressed and anxious.” Many patients are referred to relapse prevention therapy, as well as treatment for other psychiatric disorders.

Consultations with social workers (there are two on the team) also prepare patients for the procedure. Says UH social worker Carol P. Sullivan, MSW, “The social worker deals with all aspects of the patient’s life: culture, ethnicity, belief systems, values, and socioeconomic status. We do a complete psychosocial assessment of each patient and also meet with families to help them through the process.” Among the issues patients have to deal with are financial considerations and the stigma attached to alcohol or drug use.

Post-transplant, follow-up care is required for years. Transplant patients on immunosuppressive therapy require careful monitoring, with frequent liver enzyme tests. “For patients with hepatitis C, a recurrence is almost guaranteed, so many will need to be treated with medications,” states Koneru. “Standard treatment includes either interferon or a combination of interferon and ribavirin.” Patients frequently need psychiatric follow up as well, as some of their medications have side effects, including depression.

“Both before and after surgery, the team approach is somewhat like the spokes of a wheel,” says Sullivan. “Many spokes are required to complete the healing process.”

### JOURNEY TO RECOVERY

Karlynn Brown’s healing process spanned several years. When she was transferred to UH in 1989, she was critically ill and her liver was failing. She suffered from encephalopathy and loss of appetite and continued to be severely jaundiced.

On June 25, Brown received her first liver transplant. The transplanted liver did not function and her condition worsened. Physicians told her family that she would only survive another 48 hours unless another liver was found right away. Fortunately, one became available, and she underwent her second transplant.

Brown remained in the hospital that summer with numerous complications, including a resistant form of pneumonia. She stayed in the ICU for more than a month. Her weight had dropped to under 100 pounds, and she was so weak she could not walk on her own.

In January, 1990 Brown had lung surgery to resolve complications from pneumonia. After that, she improved, and finally

*Continued on page 19*

# Body Rebuild

By Eve Jacobs

**P**ETER BREMBERG'S WEB SITE has the honest, often-painful quality of an old-fashioned journal that lets you peek into a chapter of someone's private life. An Internet scrapbook of sorts, its pictures show a strong, young athlete laid low by bone cancer and the treatments to arrest its spread, whose damaged leg is subsequently reconstructed by surgical "builders."

Bremberg was 20 last spring when surgeons removed an osteosarcoma and a chunk of his left leg in the knee area. The second-year Franciscan University student—a wrestler and member of the rugby team—set out to document, with his priest, Fr. Kevin Gugliotta, his experiences from the time immediately following his diagnosis, through chemotherapy, major orthopaedic surgery, physical therapy, a second round of chemotherapy, prosthesis fitting, then learning once again how to walk, and maybe down the road, to run.



A close-up photograph of a prosthetic limb, showing the mechanical components and the skin-covered end. The image is partially obscured by the large text 'ing' in the foreground.

# ing

The young athlete's diagnosis was made on his birthday, November 29, 2002, during his Thanksgiving break from college. Bremberg had assumed that the soreness he felt in his left knee for several months was a rugby injury that would heal on its own. But the discomfort persisted. The diagnosis of cancer was followed by an initial round of chemotherapy. Then, on April 2, 2003, he had a surgical procedure called a "rotation-plasty," which cut out the cancer, but preserved enough of the patient's own leg to significantly enhance his chances of regaining full mobility.

## Recreating Forms That Function

Eighty percent of osteosarcomas grow in the bones surrounding the knee, and most appear between ages 15 and 25, more often in males than females. In Bremberg's case, the tumor involved the whole knee. According to University Hospital (UH) orthopaedic oncology surgeon Francis Patterson, MD, there are two kinds of surgeries that can be done for this type of tumor: amputation of the limb or limb salvage surgery (also called limb-sparing surgery). In the majority of cases, amputating an entire limb is no longer necessary.

Limb salvage surgery involves first removing the tumor and



X-ray of the reconstructed wrist of 14-year-old Carissa Kohler (see page 17)



Left: Francis Patterson, MD



Inset below: Peter Bremberg and his mother, Rebecca

any other diseased tissue, then “filling in” with either an allograft (a bone graft from a tissue bank), endoprosthesis (metal joint replacement) or a composite. Limb salvaging procedures have become more routine since modern

chemotherapy boosted cure rates for osteosarcoma and some other bone cancers over 60 percent. New and better implant materials and devices, and major advances in diagnostic capabilities and surgical tools and technique, primed the specialty of orthopaedic oncology surgery to leapfrog into the next century. In 2003, this surgical specialty knows how to save more healthy tissue and so improve function and appearance, while simultaneously arresting cancer’s spread and increasing the odds of halting disease recurrence.

A limb-sparing technique—called van Nes rotationplasty—is an excellent option for some patients, particularly those who are young and athletic, says Patterson, who is also an assistant professor of surgery at New Jersey Medical School (NJMS). In Bremberg’s case, the reasons for using this procedure seemed obvious. The ability to save more healthy tissue enhances the potential to rebuild a stronger limb, better able to withstand the wear and tear of everyday life as well as the more rigorous demands of sports.

According to Patterson, a rotationplasty can be done after surgically removing a sarcoma located above or in the vicinity of the knee. The procedure calls for fusing the residual femur and tibia, and rotating the leg 180 degrees on the femur so the foot is facing backwards. The ankle, in effect, takes over the function of the knee, with the remaining thigh and calf muscles controlling the new knee’s function. After healing from surgery, the patient is fitted with a prosthesis.

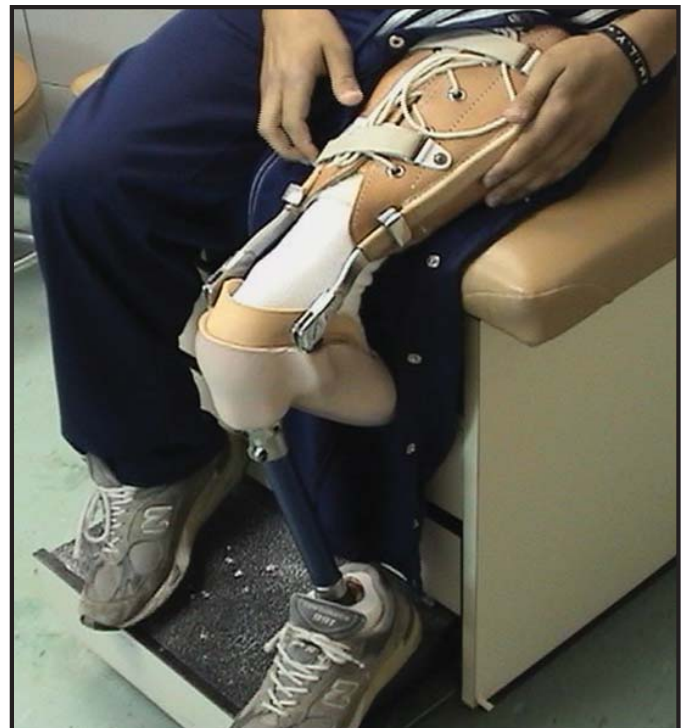
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**Rotationplasty with prosthesis**

The upside, says the surgeon, is not only that it preserves more of the patient’s healthy tissue to reconstruct the limb, but the range of motion is excellent, the limb is strong, only one operation is necessary and there is no internal prosthesis, so there is no risk of infection or need for additional surgeries years down the road to replace an aging implant. Because the patient retains his own foot—even though it no longer functions as such—there is no “phantom foot” pain.

The downside? “This is a great operation for the appropriately selected patient who understands that the alteration of anatomy will provide benefits in terms of function,” explains the surgeon. However different the leg may look, he says that most patients, after adjusting to it, have no problem with cosmetic issues, and when pants are worn, there is no visible difference between the two limbs.

“High amputations are difficult for the patient in terms of regaining function,” he continues. “Rotationplasty turns an above-the-knee amputation into a below-the-knee amputation.”

Bremberg recently met someone who had passed the New York City fire department physical exam after recovering from this type of operation; and when Bremberg was called recently to schedule his next appointment, he was out playing golf. “I guess that says something,” his surgeon comments.



Patterson says that when dealing with a tumor of the musculoskeletal system, the top goals of cutting out the entire tumor and preserving the maximum function become ever more reachable as technology advances. High on his current success list are: a 47-year-old man with a large liposarcoma of the thigh whose surgery preserved near normal motion and strength of the extremity, and who has since become a ski instructor; and a 30-year-old woman who had half her pelvis removed, and a composite of allograft and hip replacement used to reconstruct her hip, and is now planning on having a second child.

The orthopaedic surgeon's practice involves the treatment of benign and malignant bone and soft tissue tumors in children and adults, and is divided equally among primary bone, primary soft tissue and metastatic tumors. "Sometimes patients with metastatic tumors are bedridden with pain and fractures," says Patterson, "but we can provide pain relief and help the patient get out of bed, walk and maintain independence."

"What we always try to do is provide the best oncologic treatment first and foremost, but then use all available options to reconstruct the extremity and tailor each reconstruction to the patient's needs," he concludes.

## Implants That "Grow"

Among the newest developments in the world of orthopaedics is a generation of highly sophisticated implants. Joseph Benevenia, MD, vice chair of orthopaedics and an associate professor at NJMS, and director of the division of orthopaedic oncology at UH, puts these devices high on his list of major advances in the field over the last few years. One such new-generation endoprosthesis actually stretches as a child grows up.

The surgeon explains that when bone cancer strikes young children in the growing years, it often appears around the knee, necessitating removal of the knee, including major growth plates. An implant that can be lengthened to keep pace with a child's growth—without surgically reopening the leg to do so—is often just what this doctor orders. Surgeons remove the tumor and surrounding affected tissue, save the healthy tissue below the knee, and insert this simple internal mechanism that functions as a bone replacement.

The new prosthesis can be lengthened up to a centimeter at



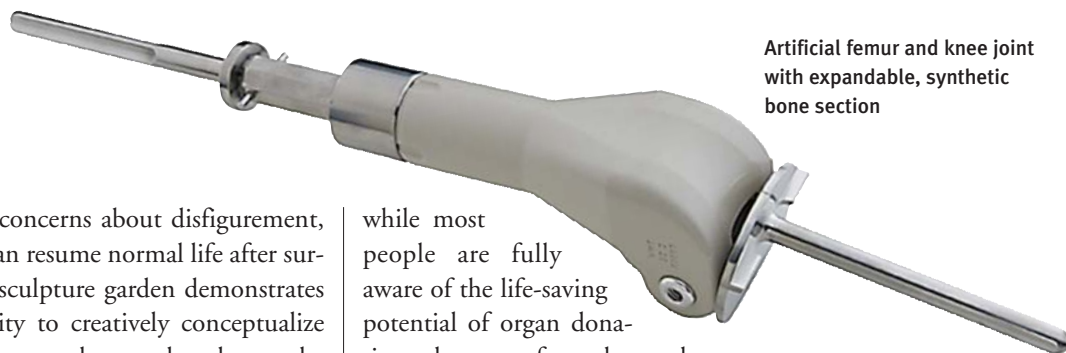
Orthopaedics patient Carissa Kohler with her surgeon, Joseph Benevenia

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a time. It uses a simple computer and a ring that goes over the leg to "melt" an internal plastic piece, allowing the implant to "stretch out slowly like a spring," according to Benevenia. This is usually done every few months for a couple of years in a procedure lasting just three to five minutes. When the child is finished growing, the expandable prosthesis is replaced with a permanent one.

"This means one additional operation versus four or five," says the surgeon. Since surgery obviously poses a risk to the child—from infection to pain to a psychological set-back—each procedure not done is a victory of sorts.

In the case of Carissa Kohler of Colts Neck, one limb-salvage procedure also did the trick. Removal of a Ewing's sarcoma of the wrist and reconstruction by moving a bone in her forearm to recreate the wrist mean the ninth-grader can ride her horse and "flex her muscle" in much the same way as other 14-year-olds. When asked about her ability to hold a pencil, keyboard, and take care of the family's newest additions—two miniature pinschers—she smiles happily and says there's really nothing she can't do. The right arm is a perfect match to the left one, no small feat when you view on the x-ray the metal plate initially used to hold the bones together. "The bone has replenished itself so well since her surgery two years ago," says Benevenia, "that the plate will probably be removed."

Benevenia, who graduated from NJMS in 1984 and completed his orthopaedic surgery residency at University Hospital, says he has always appreciated the patient perspective, from



Artificial femur and knee joint with expandable, synthetic bone section

fears about recurrent disease to concerns about disfigurement, disability and how quickly one can resume normal life after surgery. A walk through his home sculpture garden demonstrates that this empathy plus his ability to creatively conceptualize anatomical form is the link between the metal sculptures he creates and his work in the operating room. It is one of the important talents he brings to the table when reconstructing diseased and disfigured limbs.

“His ability to see beyond the disfigured body in front of him to what that leg or arm or hip should look like is at the core of what makes him a really good orthopaedic surgeon,” says Robert Harten, PhD, a biomechanical engineer in the NJMS Department of Orthopaedics.

The orthopaedic surgeon also serves on the board of directors of the Musculoskeletal Transplant Foundation, the largest non-profit tissue bank in the U.S., located in Edison. He says that

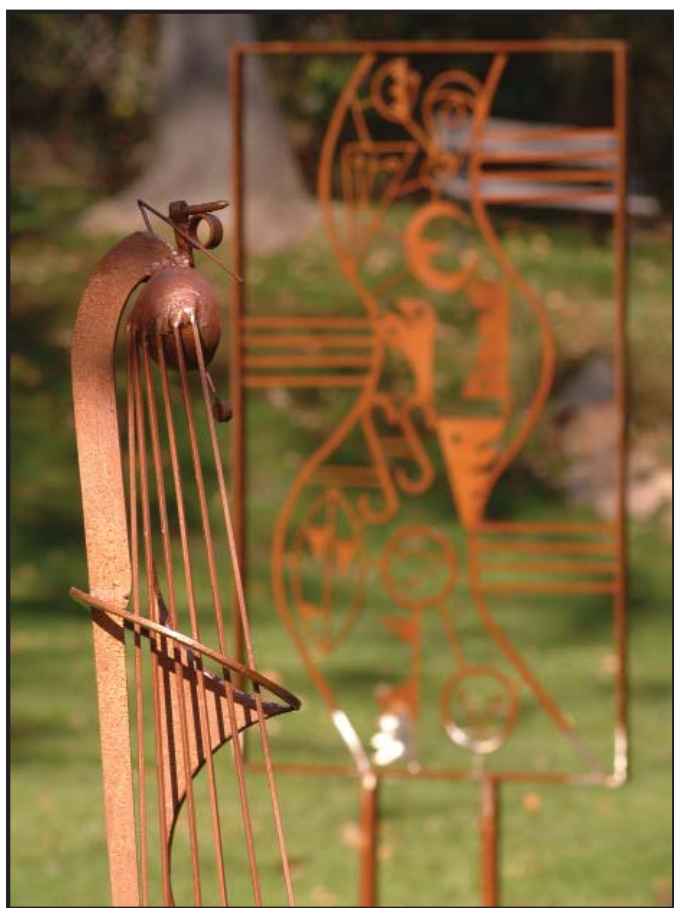
while most people are fully aware of the life-saving potential of organ donation, there are few who understand the need for donations of other tissues. In 2002, approximately 220,000 individuals received allografts provided by the Foundation and its members. Sixty percent of the musculoskeletal allografts were for spinal surgery, primarily for spinal fusions, and the other 40 percent for orthopaedic oncology, sports medicine, and other orthopaedic surgeries, mainly of the hip and knee.

According to the Foundation, there are roughly 80,000 people in the U.S. in need of organ transplants and hundreds of thousands in need of tissue transplants. The tissues that can be recovered include bones, tendons, ligaments from the legs, hips, ribs and arms, heart valves, veins from the legs, and skin.

Benevenia points out that as these tissues become safer with ever more reliable tests for pathogens, the use of allografts in orthopaedic surgery is becoming more widespread. Chief among these uses are: long bones to replace bones of the arms and legs riddled by cancer; small sections of bone to strengthen areas of the spine or to replace other injured bone; ligaments and tendons to help rebuild damaged ones; skin as a temporary covering for burn patients during healing; heart valves to replace nonfunctional ones; and veins from the legs for use in cardiac bypass surgery.

The human body is chipped, bruised, broken, sprained, cracked and scarred by disease and trauma, as well as years of encounters with a hard-edged world. But science is pushing forward. New materials such as tissue engineered polymers and growth factors, the use of advanced molecular techniques to better characterize cancers in order to treat them more effectively, advances in imaging abilities and tissue transplantation, and customized modular implants designed jointly by implant engineers and surgeons are making inroads toward fixing the superb engineering feat that is the human body—when it goes awry. But Benevenia points out that to forget the aesthetic, human side is to fail.

“An orthopaedic surgeon needs to go far beyond technical expertise,” he concludes. “It’s not just about being a right knee doctor or a left knee doctor. You have to walk hand-in-hand with the patients, making sure each one understands the process before you both take the next step.” ●



Detail of sculptures by Joseph Benevenia

## LIVER TRANSPLANTS

*continued from page 13*

returned to school in February. Even though she did most of her studying at home, she was able to graduate with her class. That fall, she enrolled in college.

During her junior year, Karlynn's liver enzymes again became elevated, and she felt weak and tired. She went on interferon therapy for a few months, but it did not help. In September 1993, a liver biopsy indicated her liver was failing.

When Sullivan went to visit Brown in the hospital a few days later, the curtains were drawn and the room was dark. Brown informed her that she was ready to quit school. It was just too hard to continue while facing a third liver transplant. The social worker encouraged her not to give up. "We'll work together to get you through this," she promised.

Brown needed an internship for one of her classes, Introduction to Social Work, but because she was ill and hospitalized, was unable to go out and find one. "Well, that's easy enough," replied Sullivan, herself a field instructor for NYU and Seton Hall University. "I'll get you one at University Hospital."

And thus began Brown's career in social work. After spending the semester "on the other side of the bed," talking to other



Karlynn Brown underwent three liver transplant procedures at UH, the most recent in 1994.

patients in the transplant program, she decided she wanted to be a social worker herself. "That's fine," says Sullivan, "but you'll have to get a master's degree. Nobody gets anywhere in social work without one."

In April 1994, Brown had her third liver transplant. This time, the surgery was uneventful, with no complications. Nine years later, she is strong and healthy. "The odds are good that she'll continue to do well," says Koneru. "Most who survive the first year will remain healthy for 10 to 15 years or more."

Brown, who obtained her master's degree in social work, is a school social worker, counseling adolescents in an alternative high school program, and was recently married. ●

## AN OLYMPIAN RECOVERY

**J**OHAN AKIN'S COMPLEX MEDICAL HISTORY includes a malignant tumor in his left leg, diagnosed as myxoid liposarcoma when he was in his early twenties. At the time, blood tests revealed elevated liver enzymes. However, nothing was done to evaluate his liver.

Akin, now 43, became seriously ill in December 1998. A self-described "fitness nut," he'd been feeling under the weather for months, but continued running and playing tennis. An acute bout of abdominal pain took him to his local emergency room, where he was admitted after having an adverse reaction to an injection of morphine. Later tests found he had cirrhosis. Akin describes himself as "a social drinker who sometimes had a bit too much." Taking his age and drinking habits into account, physicians did not think his cirrhosis was alcohol-related, but were unable to pinpoint a cause.

The patient was referred to Koneru, who said he'd most likely need a transplant. Akin, who had given up drinking the previous month, was managed by his local gastroenterologist. He suffered from such severe edema that he would have to go to his local hospital every seven to 10 days to have his abdomen drained. He continued to deteriorate, and in August, 1999 was again admitted to UH and was told he would not leave the hospital without a new liver. He was given less than a week to live.

On August 8, a liver became available and he underwent successful surgery. The once-strapping six-footer had gone down to 140 pounds and was so weak he could barely walk. A long course of physical therapy helped him regain his weight and strength.

In July 2003, Akin traveled to France for the Transplant Olympics, an international competition for those who have had organ transplants. He competed in three events—golf, tennis and riflery—and received the bronze medal in riflery.

# Pediatric AIDS Grows

By Maryann Bucknum Brinley

The circumstances felt like a black plague of epic proportions.

Put yourself in a pediatric hospital in Newark between 1978 and 1983. A mysterious gay men's disease had begun killing by the thousands. About the same time, a lethal virus started showing up in babies and children. It looked and acted like the same scourge.

Back then, the only defensive drug weapons in James Oleske's medicine chest were antibiotics and immunoglobulin injections. "I was baffled," says the Francois-Xavier Bagnoud Professor of Pediatrics at NJMS and director of the Division of Allergy, Immunology and Infectious Disease. "I remember calling experts in immunology all over who were baffled too." His first little patient died in 1978, but not until 1983 would AIDS be definitively named as the culprit in children, the same as in dying men and illicit drug users. Available data set the death toll by 1983 in the U.S. at 2,921, but the epidemic had spread to five continents, and the virus (HIV), first known as HTLV-3, wouldn't even be isolated until 1985.

# Up

All HIV infected children were expected to die quickly, certainly before school started for them, and certainly during the 70s and 80s. Near the UMDNJ–New Jersey Medical School (NJMS) campus, Perry’s Funeral Home was a familiar haunt for frustrated healthcare givers. Even as recently as 1994, Oleske, the physician who first discovered that pediatric patients were suffering from a disease supposedly confined to male homosexuals, recalls, “We had 34 deaths out of 250 children. It was such a drain on everyone emotionally and physically that we held a memorial service at the end of that year and invited all the families of the deceased. Everyone in attendance, even kids in the choir, started crying so hard that we had to stop the ceremony. We just got up, gathered at the altar and hugged one another.”

Fast forward to the present.

Look at last year’s numbers. In 2002, Oleske’s pediatric HIV/AIDS team at University Hospital (UH), the largest site in a National Institutes of Health (NIH) Pediatric AIDS Clinical Trials Group (PACTG) with 236 patients, lost only one child. Just one.

“Children with HIV are living and this is wonderful,” Oleske says. “Not only are they healthy enough to go on to grammar school but some are off to college, graduate school and, as young adults, they are becoming parents of babies who are being born without perinatal HIV. There has been a revolution in how we treat kids.”

## Medicines Making The Difference

What has made the dramatic change in death rates and life itself for HIV infected children—whether they arrive in this world with the perinatally acquired virus or pick it up later from exposure to blood, vaginal fluid, semen or breast milk—are the anti-retroviral medicines, especially protease inhibitors, which emerged in the mid-90s. What’s more, an evolving generation of pharmaceutical cousins, new cocktails, and maybe even vaccines, are in the pipeline. Oleske sees “fusion inhibitors” as the next class of antiretroviral drugs in the near future. The need for novel drugs is ongoing because HIV is not a static virus but capable of morphing into drug resistant strains. Even scaling back the dose of a medicine with intolerable side effects to make a patient more comfortable can destroy the treatment’s power. In infants who share 50 percent of their mother’s immune genes, the theoretical possibility of encouraging the growth of newer HIV variations is frightening. Paul Palumbo, MD, NJMS professor of pediatrics and vice-chair of PACTG, says that, in a baby, “The infecting virus may already have learned (evolved) to escape immune surveillance.”

James Oleske, MD



In fact, this apparently positive juncture in the battle against pediatric HIV can't honestly be called a satisfying tale of better-living-happily-ever-after through chemistry. While there may not be as many AIDS funerals to attend here in the U.S., there are ups, downs, a cascade of side effects and a virus with the power to mutate, become resistant to medications and hide dormant in the body's cells, lymph glands, blood, and parts yet unknown, possibly forever and in spite of being hit with chemical arsenals. There is also the spectre of the "numbing tragedy" Oleske describes on the international scene where death from HIV/AIDS is so commonplace that 20 percent of the world's population may disappear.

The U.S. can estimate less than 100 children's deaths as a result of HIV/AIDS in 2002. In Africa, where access to medication is limited, the number of kids who died was more than half a million last year. Even in America, AIDS is not going away. According to the CDC, about 900,000 Americans are currently infected and a quarter don't know it. "This virus is fickle," according to Oleske, "and it could surprise us with a resurgence right here if we aren't careful." Robert Johnson, MD, NJMS professor, interim chair of the Department of Pediatrics and Director of the Division of Adolescent and Young Adult Medicine, also sees HIV/AIDS reeling into future generations. "The population of adolescents who are getting

infected with HIV is growing very rapidly and this group is most likely to spread the virus through sexual contact. They don't even know they have the virus and symptoms won't show up for 10 years unless they get tested. And if you aren't sick, you aren't likely to go for testing," Johnson says (see sidebar).

## Nukes, Non-Nukes & PIs

With no cure in sight for AIDS, researchers in the late 80s discovered the first of several classes of drugs called antiretrovirals that could inhibit the growth and replication of HIV at certain stages. These nucleotide analogue reverse transcriptase inhibitors, NRTIs or "nukes," such as Retrovir (zidovudine or AZT), Epivir (lamivudine or 3TC), Ziagen (abacavir or ABC), Hivid (zalcitabine or ddC), Videx (didanosine or ddI), Zerit (stavudine or d4T), Combivir (AZT + 3TC), Trizivir (ABC + AZT + 3TC), and Viread (tenofovir disoproxil fumarate or TDF) all block an enzyme (reverse transcriptase) essential for HIV growth. Combinations of these drugs lowered the amount of virus in a patient's blood, and increased the ability to fight opportunistic infections that would otherwise attack a weakened immune system and cause death. Experts had also learned that HIV could be present long before signs of AIDS, in the form of fevers, night sweats, diarrhea and swollen glands, appeared. This explained why some mothers of HIV-infected babies seemed healthy.

Soon after the arrival of the NRTIs came non-nucleoside reverse transcriptase inhibitors (NNRTIs), or "non-nukes," which also stopped the genetic material of HIV from overtaking healthy cells by blocking the same enzyme (reverse transcriptase). Delavirdine (rescriptor or DLV), Nevirapine (viramune or NVP) and Efavirenz (sustiva or EFV) fall into this NNRTI category.

Then, in 1996, protease inhibitors (PIs) demonstrated that they could confuse an enzyme created by HIV called protease. PIs make the virus so structurally irrational that it becomes non-infectious. Invirase (saquinavir or SQV as hard capsules), Fortovase (saquinavir or SQV made as soft, absorbable, gel capsules), Norvir (ritonavir or RTV), Crixivan (indinavir or IDV), Viracept (nefinavir or NFV), Agenerase (amprevavir or APB), Kaletra (lopinavir plus ritonavir or LPV), and Atazanavir are the PIs available for use in combination with two NRTIs, with or without a NNRTI. Now, HAART, or Highly Active Anti-Retroviral Therapy, a combination of three or more agents, is deemed the best way to suppress symptoms and keep the load of viral particles in the body low. There has been a 70 percent



**“We just aren’t creating enough awareness. Women are still being infected and don’t see themselves at risk”—even from the men in their lives who are HIV carriers.**

**—ARLENE BARDEGUEZ, MD**

drop in mortality rates among infected children since HAART tactics were introduced.

Yet, these medical regimens come with proverbial strings attached in the form of side effects and unknown, long-term consequences. HIV medications can cause fatigue, anemia, headache, nausea, vomiting, diarrhea, weight loss and other problems. Tuberculosis and hepatitis C, both major public health threats, travel alongside HIV, too. To confound care further, some drugs provoke the same conditions HIV can cause. Anemia, for instance, can be traced to HIV as well as to medications which suppress it. Into this delicate, drug-dependent balance, nutritional supplements including vitamins, alpha-lipoic acid, glutathione capsules and others also become part of patients’ complementary medicinal strategies.

## **Protecting Mothers & Babies**

The message that the fight against pediatric HIV is far from won is spelled out clearly in the anxiety on the face of Arlene Bardequez, MD, NJMS associate professor of obstetrics and gynecology, when she discusses her justifiable fear of what this tricky virus is capable of causing in the mothers and babies under her care.

Bardequez has been working alongside Oleske since 1987. “It’s been a very emotional experience and we have done a lot of good things. There are far fewer babies being born with HIV but we continue to have about 50 cases a year and about half are newly diagnosed in pregnancy. We just aren’t creating enough awareness. Women are still being infected and don’t see themselves at risk”—even from the men in their lives who are HIV carriers.



During pregnancy, when women ordinarily steer clear of medications, HIV positive mothers—and some of Bardequez’s patients are still in shock with the weight of brand new diagnoses—must adopt drug regimens with potential side effects and no guarantee that their babies will be born virus-free. “We have reduced transmission to 2 percent with the use of combination therapy, so our approach is to try medical treatment first,” says Bardequez. “If that doesn’t work, then we advise Caesarean section.” A rapid HIV test, offering results within 45 minutes, can also be given during labor to detect the virus in women who have not received any prenatal testing. After birth, breastfeeding is discouraged because breast milk can transmit the virus.

Apprehensively, Bardequez and her staff hold their communal breath during the challenge of managing such complex cases. She says, “When the baby of an HIV-infected mother is born virus-free, I thank God the pregnancy and delivery are over.” Not until six months and frequently only after 18 months of age can an infant be judged HIV-free, because a baby won’t manufacture the antibodies indicating HIV presence until then. When one of Bardequez’s pregnant patients refused to take her medication or undergo a C-section, the infant was at much greater risk of being born with HIV even though this mother’s viral count had been low. Newborns who have been infected early in pregnancy with HIV can experience rapid progression of the virus with immune impairment and the development of opportunistic co-infections such as cytomegalovirus (CMV) disease causing deafness and blindness before their first birthday.

What also upsets this mother-infant bond are varying hormonal levels which can skew the absorption of medicine in a woman’s body. Complications can be complex because both have been exposed to many drugs. Meanwhile, medication recommendations for child-sized bodies are not clear-cut. Smaller, in fact, doesn’t call for smaller doses but just the opposite. “Though a baby may use the same medications as a mother, the

*continued on page 39*



Monique Roy, MD • Associate Professor, Department of Ophthalmology

# Preventing Visual Loss From Diabetic Retinopathy



**A CHALLENGE TO ALL PHYSICIANS** is keeping current in an environment of constant change. There is more information available, but less time to read it. So, to ease the burden, each issue of NJMS Pulse will offer a CME module by a notable NJMS specialist/researcher.

If you would like credit for this course, or just want to finish reading the article, go to the online address on the bottom of page 25. The purpose of this program is to review how primary care physicians and specialists can collaborate to identify persons with vision-threatening diabetic disease so that they can get appropriate treatment. The course is designed for all physicians.

### Overall Learning Objectives

- ▶ Recognizing the risk factors and clinical signs of diabetic retinopathy (DR);
- ▶ Understanding both the ophthalmologic and medical treatments of DR;
- ▶ Understanding the recommendations for appropriate eye care for persons with diabetes mellitus.

**For more information on the Center for Continuing & Outreach Education (CCOE), visit their Web site at [ccoe.umdj.edu](http://ccoe.umdj.edu).**

**Accreditation** The UMDNJ–Center for Continuing and Outreach Education (UMDNJ–CCOE) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education (CME) for physicians.

UMDNJ–CCOE designates this educational activity for a maximum of .5 category 1 credit toward the AMA Physician's Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

**Disclosure** In accordance with the disclosure policies of UMDNJ and to conform with ACCME and FDA guidelines, all program faculty are required to disclose to the activity participants;

- 1) the existence of any financial interest or other relationship with the manufacturer of any commercial product or provider of commercial services that relates to the content of their presentation material; or commercial contributors of this activity that could be perceived as a real or apparent conflict of interest.
- 2) the identification of a commercial product that is unlabeled to use or an investigational use of a product or device that is not yet approved.

Monique Roy, MD, reported no significant relationships. ●

Diabetes mellitus is a common and complex multifactorial disease of carbohydrate metabolism. Most (~90%) diabetic persons have type 2 (either insulin- or non insulin-requiring), while 5–10% have early onset insulin dependent type. Other forms of diabetes (~2%) are secondary to other conditions, and include gestational diabetes, a transient condition during pregnancy, which occurs in 2–5% of pregnancies.

In the United States, the prevalence of diagnosed diabetes is increasing, particularly among minority populations; in New Jersey, 5.8% of the population had diagnosed diabetes in year 2000. But, it is estimated that nearly 50% of the persons with diabetes remain undiagnosed. This represents a major public health problem in the U.S. since diabetes and its complications are associated with high morbidity and mortality.

Diabetic retinopathy (DR) is the most common ocular complication of diabetes. It is a disease of the small blood vessels supplying the retina (the tissue lining the inside of the eye), which is essential to vision. DR is the leading cause of blindness in Americans age 20 to 64 years, resulting in more

than 8,000 new cases of blindness per year, despite the fact that visual loss due to DR may be preventable by medical and ophthalmologic treatment modalities.

In the U.S., preventing visual loss from DR has been identified as a major goal. Thus, DR screening to identify persons with vision-threatening disease and access to eye care must be improved for all persons with diabetes.

The following is a review of the clinical manifestations of the disease, current therapeutic modalities, and recommendations for eye care in persons with diabetes mellitus.

### CLINICAL SIGNS OF DR

Diabetic retinopathy may be divided into non proliferative and proliferative forms:

Non proliferative DR (NPDR) manifestations include retinal vascular dilation, microaneurysm, intraretinal hemorrhages, nerve fiber infarcts or cotton wool spots, hard exudates, retinal thickening or edema, intraretinal microvascular abnormalities, and venous beading. Unless these changes affect the center of the retina or macula, vision may not be affected. However, increased retinal vascular permeability resulting in retinal edema in the macula, so called clinically significant macular edema (CSME), is a major cause of visual loss in diabetic persons.

Proliferative DR (PDR) reflects a more advanced stage of the disease and is defined by neovascularization of the optic nerve, retina and/or iris. The new vessels grow out of the retina into the scaffolding provided by the vitreous cortex typically at the junction of the vascularized and non vascularized retina. Over time, new vessels lay down fibrotic tissue with subsequent contraction

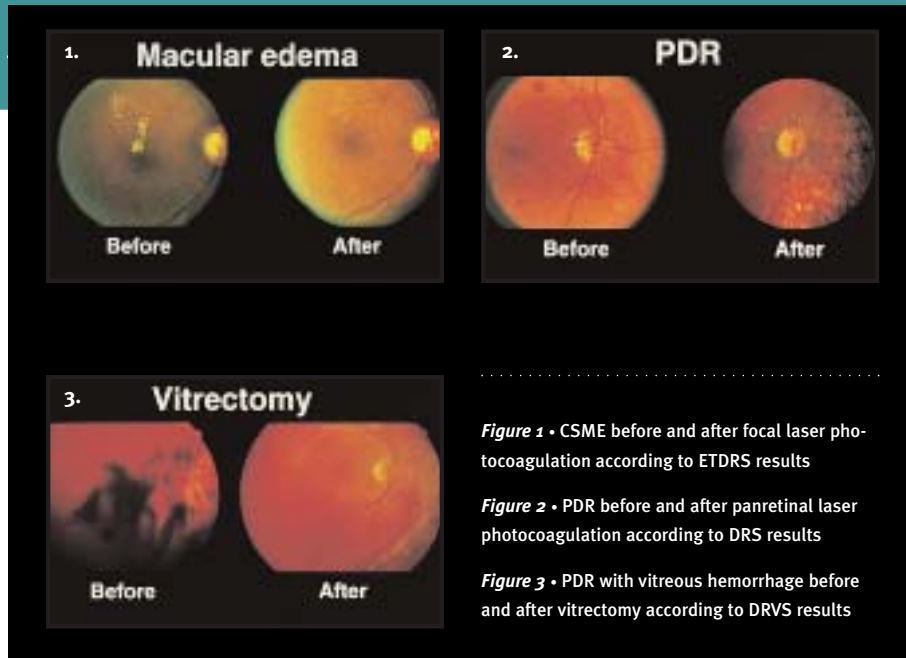


Figure 1 • CSME before and after focal laser photocoagulation according to ETDRS results

Figure 2 • PDR before and after panretinal laser photocoagulation according to DRS results

Figure 3 • PDR with vitreous hemorrhage before and after vitrectomy according to DRVS results

resulting in preretinal and vitreal hemorrhages and traction retinal detachment.

Fluorescein angiography, a procedure involving the injection of fluorescein dye into an arm vein and photography of the retina as the dye circulates through the retinal blood vessels, is commonly used in the clinical setting to identify the presence and severity of the diabetic retinal changes.

### PATHOGENESIS OF DR

Nearly (>90%) all persons with diabetes of 20 or more years duration will develop some degree of DR. The pathogenesis of the initial vascular changes of DR are not fully understood. Biochemical, hemodynamic, and endocrine factors appear to contribute to damage to the vascular wall, resulting in leakage and occlusion of the small retinal capillaries. It is thought that hyperglycemia induces vascular dysfunction leading to retinal hypoxia and induction of growth factors, among which vascular endothelial growth factor (VEGF) appears to play a major role. VEGF mediates endothelial cell proliferation and neovascularization as well as retinal vascular leakage. Activation of protein kinase C is critical for the various steps in this pathway.

### EPIDEMIOLOGY OF DR

**Visual impairment.** Diabetes is the leading cause of new cases of blindness in persons age 20 to 64 years in the U.S. Approximately 8% of legally blind persons report diabetes as the cause, and 12% of new cases of blindness are due to diabetes. In the younger-onset patients, DR is responsible for >85% of legal blindness while in older onset patients, other causes (macular degeneration and cataract) are more frequently encountered as causes of blindness. In diabetic persons, the frequency of visual impairment increases with age, to a maximum in those 65 to 74 years of age, and then declines thereafter, probably related to high death rates in the older age groups. Prevalence of visual impairment and legal blindness is higher in younger onset and older onset insulin-taking patients than in older onset non insulin-taking persons.

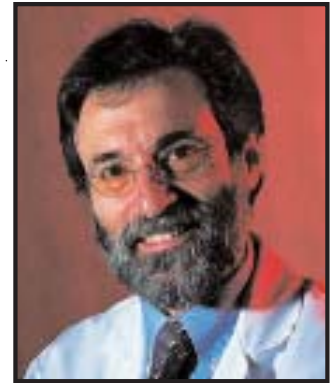
The major causes of visual loss in diabetic patients are macular edema, capillary non perfusion in NPDR, and the complications of PDR (including vitreous hemorrhage and traction retinal detachment). ▶ ▶ ▶

To finish reading the article and/or take the test, log on to [http://ccoe.umdj.edu/ccoe/online\\_learning.html](http://ccoe.umdj.edu/ccoe/online_learning.html)



Charles H. Kellner, MD

## ECT is Back (It never really left)



**E**CT (ELECTROCONVULSIVE THERAPY) is the most effective treatment known for serious clinical depression. There is no scientific or clinical controversy about that. ECT has been in continuous use worldwide since 1938, and has recently enjoyed something of a resurgence in use because of advances in technique that make it even safer and better tolerated than previously.

The ECT service at University Hospital opened in April of this year, and is currently available to treat both inpatients and outpatients. Almost all large academic medical centers around the country offer ECT, and University Hospital has joined the mainstream of modern psychiatric practice.

ECT has been controversial in the past because in the 1940s and 1950s it was overused, and was given without the benefit of modern anesthetic techniques. To this day, an anti-ECT lobby exists. Misinformation and scare tactics are used to distort how ECT is performed.

It is time to put such damaging (to patients who need ECT) and inaccurate portrayals behind us.

ECT is, and should be, reserved for a very small percentage of the most seriously depressed patients. It is typically used when antidepressant medications have been ineffective or cannot be tolerated. It is also sometimes used when patients are so severely ill (either suicidal, malnourished or psychotic), that they need relief from depression urgently, and cannot tolerate the "lag time" of antidepressant medications. In many situations, ECT can literally be life-saving.

ECT is almost exclusively used when the diagnosis is severe major depression, either unipolar or bipolar. Occasionally it has a place in the treatment of schizophrenia or the manic phase of bipolar illness. ECT is given as a series of treatments under full general anesthesia with muscle relaxation. It is normally done on a three times per week schedule in the morning, on an empty stomach. Typically, a course is from six to 12 treatments and should be individualized to the patient's needs. Treatments are continued until the depressive episode is resolved. ECT is remarkably effective and is successful more than 75 percent of the time. Remember that this is true despite the fact that most ECT patients have failed to respond to powerful antidepressants, often in combination. Interestingly, ECT works best in the most severely depressed patients.

ECT is remarkably safe and is most commonly given to elderly patients, many of whom have complex multi-system medical illnesses. For some, it may even be safer than taking antidepressant medications. Like all medical procedures, ECT has risks. ECT is a serious treatment that should only be

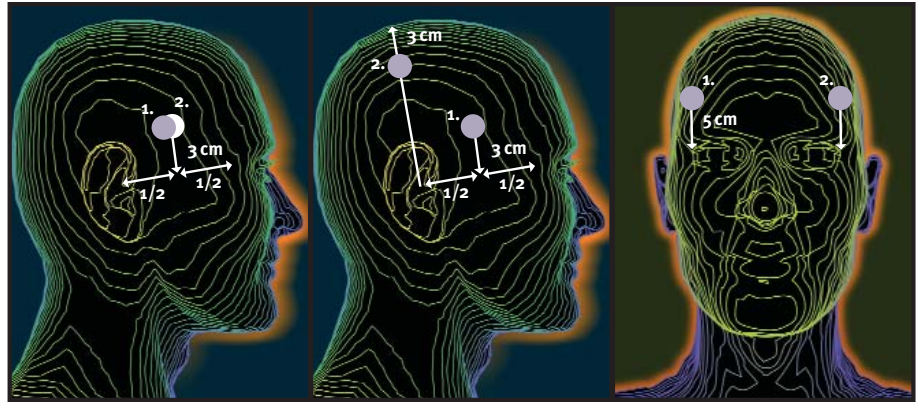
prescribed for serious psychiatric illness. The main side effect of ECT is memory loss, but for most patients this is limited to the past several weeks or months preceding treatment, and is an acceptable trade-off for a return to health.

Advances in ECT technique have allowed us to improve the cognitive side effect profile while maintaining its remarkable antidepressant efficacy. ECT can be done with one of three different techniques (bilateral, bifrontal and unilateral electrode placement), chosen on the basis of how urgently ill the patient is, versus the need to cause as little memory loss as possible. Bilateral electrode placement is the most powerful antidepressant technique, but causes more memory loss than either bifrontal or right unilateral electrode placement. Right unilateral electrode placement causes much less memory loss, but sometimes may not be as effective an antidepressant. Bifrontal electrode place-

## ECT has been controversial in the past

because it was overused and given without the benefit of modern anesthetic techniques.

It is, and should be, reserved for a small percentage of the most seriously depressed patients.



Electrode placement sites for the bitemporal (BT), right unilateral (RU) and bifrontal (BF) positions.

ment is being studied at New Jersey Medical School (NJMS) and four other academic medical centers around the country, in an NIMH-funded research project headed up by NJMS, as an alternative technique that may combine the best features of the other two techniques.

ECT does not “cure” the patient, but it does treat the current episode of depression quickly and often completely. Serious depression is usually a recurrent, and sometimes chronic, illness, requiring ongoing treatment to prevent recurrences. After a successful course of ECT, almost all patients should be put back on antidepressant medications to increase their likelihood of remaining well. For some patients who have a history of frequent relapses despite antidepressant medication treatment, “maintenance” ECT can be considered. This is the use of a single outpatient treatment approximately once a month, given for the purpose of preventing a future recurrence of depression.

ECT is back as a well-accepted and necessary treatment in modern medicine, but the truth is it never really went

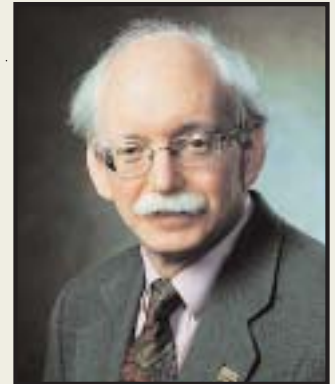
away. For the more than 100,000 patients/year in this country and several million worldwide who get relief from their debilitating symptoms of depression, this is welcome news. ECT is far from perfect, and we do not yet know the exact mechanism of action by which it exerts its powerful antidepressant effects on the brain. However, we do know that modern ECT offers a safe and effective alternative for seriously depressed patients who have not responded well enough to antidepressant medications. ●

*Charles Kellner, MD, is chair of the Department of Psychiatry at NJMS.*

**The ECT service at University Hospital is pleased to accept referrals from psychiatrists. Consultation about the appropriateness of the ECT option is available, as well as outpatient and inpatient scheduling of acute courses of ECT and maintenance treatments. Several research protocols are also available for patients interested in helping to advance the clinical science of depression treatment while receiving state-of-the art clinical care.**

John Katz, MD '75

## A Message to Alumni



**T**HE SETTING WAS THE BEAUTIFUL Dolce Hamilton Park Hotel in Florham Park, NJ. The date was March 29, 2003. The attendees were all in festive moods as they gathered together to celebrate their anniversaries and reminisce and share news of their families and professional accomplishments.

As President of the Alumni Association, it was my great honor to present the Honorary Alumnus Award to Russell T. Joffe, MD, dean of New Jersey Medical School. This award is the highest alumni award given to a non-alum. His dedication to the school and its students best represents the ideals of the Association.

In celebration of their 40th anniversary, the members of the Class of 1963 were treated to "Traditions," a special presentation by Joseph A. Cannaliato, MD'63. The program included past and present photos of the class and concluded with the celebrants

reciting the Oath of Hippocrates once more. I would like to share with you the following excerpt from "Traditions."

"Those bonds, although subliminal, built with colleagues and their

profession beginning on that very first day and strengthened and expanded in the ensuing years, still exist.

Those bonds will endure a lifetime, long after youthfulness and memories begin to

fade. All that would follow began that sunny September day when a group of excited, bright, eager young eagles took their first flight into what would become an adventure



of a lifetime. I am proud to have been a member of that group. All of us, as well as those who preceded and followed us, owe a debt to the profession that took us under its wing and to our teachers and school that expanded our minds and nurtured our desires. The traditions of striving for excellence and support for the profession should never be forgotten."

It is my hope that you will be inspired to keep in touch with your classmates, the Alumni Association and your School. Reunion 2004 is just around the corner, so please mark your calendars and gather friends from your class for the Annual Alumni Association Reunion at the Sheraton Tara Hotel in Parsippany, NJ on April 3. A good time will be had by all, and I look forward to seeing you there. If you would like to be part of the planning, call Dianne Mink at the Alumni Office: 973-972-6864 or 800-477-7040. ●

## News of special interest to NJMS graduates



### 1. Class of '75

(Left to right) Top Row: Drs. John Katz, John Favetta, Anthony Scillia  
Bottom Row: Jane Ryan Katz, Gloria Favetta, Barbara Scillia

### 2. Class of '63

(Left to right) Top Row: Drs. Nicholas Laurora, Ronald Filippone, Richard Cavanagh, Joseph Cannaliato, Herman Birkner, John Greenberg  
Bottom Row: Drs. Thomas Bejgrowicz, Harry Boltin, Joseph Ritter, Nino Carnevale, Philip Urso

### 3. Class of '79

(Left to right) Drs. Joseph V. DiTrolio, Suzanne Atkin, Mark Johnson

## NJMS CALENDAR *of* EVENTS

### SUMMARY OF FALL EVENTS

As the summer waned, the Alumni Association greeted new students during Orientation week, providing breakfast, clipboards and penlights, tickets to a Newark Bears baseball game and a warm welcome. The week ended with the White Coat Ceremony, followed by an Alumni Association-sponsored reception for more than 600 students and their families.

During October, student callers contacted nearly 3,000 alums to help raise money for the Annual Fund Drive 2003, which supports student scholarships. More than 250 attended the Annual Alumni Association Scholarship Awards Dinner on October 21, when donors presented more than \$154,000 in scholarships to 119 recipients. Photos of the event will be included in our next issue.

**January 22** Alumni Association Board of Trustees  
Dinner Meeting—MSB B515, 6 p.m.  
All alumni are encouraged to attend.

**March 18** Match Day  
Grand Foyer, 11:30 p.m.

**April 3** Alumni Reunion  
Cocktails, Dinner and Dancing, 6:30 p.m.  
The Sheraton Tara Hotel, Parsippany, NJ  
Details to be announced.

**May 21** Alumni Lectures  
Details to be announced.

**May 24** Convocation

**May 25** UMDNJ Commencement

**June 3** Alumni Association Board of Trustees  
Annual Meeting—MSB B515, 6 p.m.  
All alumni are encouraged to attend.

For information or to register for any of these events, please call the Alumni Office at 973-972-6864; from outside NJ, call 800-477-7040.

# Summer Externship in England

**S**INCE 1999 THE ALUMNI ASSOCIATION has sponsored a program for medical students to participate in a formal externship in England. The externship was developed in conjunction with St. George's University School of Medicine, Grenada, West Indies, and organized by Joseph V. DiTrollo, Jr., MD '79, past president of the Alumni Association and Orazio L. Giliberti, MD, associate dean for clinical affairs at St. George's University. This summer, three NJMS students, Suzanne Anderson, Smeeta Sinha, and Joseph Vella, were selected to benefit from the invaluable experience of a firsthand look at healthcare delivery in Europe. They wrote about their experiences, and here are excerpts from their essays.

## Suzanne Anderson '06

The question of how to spend my summer weighed heavily on my mind. I already had basic science and clinical research experience, having worked for several years between college and medical school. What I wanted was some REAL clinical experience. To that end, I applied for the Alumni Association Summer Externship in England Scholarship. The idea of spending a month at an overseas hospital held promise and excitement. I would not be disappointed....

Two classmates and I were assigned to Stoke Mandeville

Hospital, a National Health Service (NHS) facility in Aylesbury, Buckinghamshire. Our host, Dr. Michael Webley, coordinated our schedule to give us a broad exposure to clinical medicine.

During the introductory week, we reviewed the elements of history taking and physical exams, then went to the wards to put this information into practice. There was no greater reinforcement than directly applying the techniques I had just learned and observing first-hand. I was particularly humbled by the generosity of the patients, who agreed to be examined with the express knowledge that it was only for our education. "They've got to learn

somehow, haven't they?" was a common refrain. We split most of week two between the operating theatre and the radiology department. I silently thanked Dr. Leung and Dr. Vasan (two of my anatomy professors), as the surgeon queried us on the blood supply to the bowel during a "Whipple" procedure to remove a pancreatic tumor. This experience made me feel more confident in my NJMS education—yes, I had seen these things before and yes, they were definitely relevant.

The following Saturday we joined St. George's medical school students for an ophthalmology study day. Again, we were paired with real

patients so we could observe their cataracts, diabetic retinopathy and macular degeneration. This experience was excellent preparation for our third week, which was spent in the various ophthalmology clinics. As a result, the ophthalmoscope no longer instills a sense of fear and inadequacy and I can routinely find the retinal vessels and optic discs.

The morning I observed cataract removal and lens replacement was memorable. I was able to observe each delicate step through a teaching microscope that afforded me the same view as the surgeon. When I asked the anesthesiologist if I could follow a patient from induction to recovery, he taught me far more than I expected, allowing me to provide ventilation for a patient using a bag and mask and guiding my hand during the insertion of a laryngeal mask airway (LMA). I accompanied the patient through the procedure and into recovery until she regained consciousness, the LMA was removed, and she began breathing again on her own. These controlled experiences are increasing my clinical competence and will be invaluable during my third and fourth year rotations.





I was fortunate to learn from many dedicated clinicians at Stoke Mandeville Hospital who generously shared their time and expertise. I am indebted to Dr. Joseph DiTrollo and the Alumni Association for making this opportunity possible.

## Smeeta Sinha '06

I was fortunate to observe first-hand the National Health Service Trust in practice and to have an early exposure to clinical medicine on the hospital wards at the Stoke Mandeville Hospital.

We began each morning with a didactic session, followed by a trip to the wards, where we would have the opportunity to conduct history and physical exams on various patients. We were

treated like other medical students and participated in ward rounds. Particularly valuable was the amount of time we spent in the operating theatres, where the surgeons were wonderful in explaining every step. We also spent time in the radiology department observing different procedures like CT/MRI, ERCP and endoscopies, and devoted a week to the study of ophthalmology, where we attended clinics, practiced performing the slit-lamp exam, and observed surgeries.

The doctors also taught us about British healthcare. Initially I was amazed by the brilliance of a system that provides a high standard of healthcare for all. It soon became apparent, however, that as in the U.S., the British system has its flaws,



Back, left to right: Smeeta Sinha, Dr. Roger Bodley, Dr. Michael Webley, Joseph Vella. Front: Suzanne Anderson

as demonstrated by the 10-month waiting lists for hernia repair surgery and other non-emergency procedures. Despite the long waits, the patients were extremely tolerant and more than happy to share their stories with us and allow us to learn by examining them. They truly made my experience all the more remarkable. Once again, thank you so very much for the four most enriching weeks I have ever had in a summer.

## Joseph Vella '06

I knew that many things in England would be different, but I never really put much thought into exactly how different they were going to be. That is exactly what made the experience so wonderful: everything was so different

but the goal was still the same. The patient care was excellent, and it showed in how appreciative everyone was. We spent time in each department, and many of the doctors there immediately adopted us as their own. Most of the people I worked with expected me to be in my third or fourth year of training. While this was a bit daunting, it also gave me a sense of responsibility. More than anything, however, my experience at Stoke Mandeville was a great opportunity for a level of clinical exposure that, as a first-year medical student, I would not have received anywhere else. I am very grateful to the NJMS Alumni Association for this opportunity of a lifetime. It was an excellent learning experience. ●

Externs conduct a mock examination.



Joseph Rubelowsky, MD '87



# Doctoring in a War Zone

by Mary Ann Littell

**S**URGEONS ARE ACCUSTOMED to being in the line of fire, at the edge of intense action. But nothing he learned in medical school could have prepared heart surgeon Joseph Rubelowsky (NJMS '87) for the experience of practicing medicine in war-torn Afghanistan.

Rubelowsky, a lieutenant colonel in the Army Reserve, was called to active duty in August 2002. He left his family and busy practice in Carbondale, IL to go to the 339th Combat Support Hospital at Bagram Air Force Base near Kabul, where he spent four months treating the casualties of war. It was quite an experience—and one he might be repeating soon. “There’s a chance I may be getting called back, this time to Iraq,” he says.

Rubelowsky, who leads the Prairie Heart cardiac surgery team at Memorial Hospital in Carbondale, says it was difficult to leave a busy medical practice for four months at a stretch—to say

nothing of leaving his family, which includes his wife, Karen, and two children, Mark, 12, and Sarah, 8. But the sacrifice was well worth it. “We are so fortunate to live in this great country,” he says. “This is a way we can give something back.”

Rubelowsky joined the Army Reserve as a second year resident at University Hospital in Newark. His decision was due in part to a unique relationship he formed with one of his professors: Kenneth Swan, MD, professor of surgery and himself an Army reservist (see sidebar, page 34). “Dr. Swan inspired many of us to join the military,” says Rubelowsky. “He didn’t preach about

it—he just set an example for us to follow. He was highly respected as a physician and teacher, and to see him serving his country was inspiring, and made us want to do it too.”

Being a reservist isn’t particularly demanding during peacetime. They are required to undergo annual training but are not asked to do much else. However, when times aren’t so peaceful, they’re quickly deployed. And once the actual fighting is over, they are usually the last ones sent home.

Approximately 78 percent of the military’s “medical assets” are in the Reserves. According to the Geneva Convention, medical personnel must provide the same care to the enemy as to their own soldiers. A typical stint for a physician in the Reserve is four months. “That’s manageable, but six to nine months will seriously harm your practice,” says Rubelowsky. For well-established, busy physicians, the sacrifice is considerable.

Rubelowsky’s office is a satellite to the



Prairie Heart Institute in Springfield, IL, some three hours from Carbondale. When he was called to Afghanistan, physicians from the Springfield office had to come to Carbondale to keep the practice going. “They literally had to move here for four months,” says Rubelowsky. “So it was a sacrifice for them too. I’m grateful to them for filling in for me.” He’s currently seeking a partner for the Carbondale practice so it will be staffed in the event he is re-deployed.

The surgeon says that life in Afghanistan presented many challenges. “Picture having just seven showers for 7,000 people,” he states. “We all lived in tents and used port-o-johns. There was wind and dust everywhere. The showers were at one end of camp, the mess tent was at the other end. You’d be covered with dust and take a shower. But by the time you walked to the mess tent, you were filthy again.”

The primary mission of the medical team is to treat American and coalition soldiers, but they provide care for anyone who is injured. Many of their patients were in fact Afghans suffering everyday illnesses—sprains and strains, insect bites, and the like—as well as the traumas of war. In a country littered with land mines (some 10 to 20 million of them, according to Rubelowsky), the team treated numerous devastating injuries, including many to children.

“It’s scary every time you do surgery,” says Rubelowsky. But the emergency brain surgery he performed in Afghanistan was without a doubt one of his most high-pressure situations. An Afghan man sustained a serious head injury in a motorcycle accident and was brought to Rubelowsky’s base. Brain tissue was exposed, so the man needed immediate care. Unfortunately, there

was no neurosurgeon stationed there, and bad weather prevented the possibility of transporting the patient elsewhere. So Rubelowsky was pressed into service, even though he’d had no experience with brain surgery.

While the patient was prepped, the surgeon had time for one quick phone call—but in Afghanistan, no overseas calls are quick. He went to the tactical operations tent at the base and made a call to Scott Air Force Base in Belleville, IL. They patched in the call to Memorial Hospital, which then forwarded it to the home of Dr. Sumeer

Lal, a neurosurgeon colleague of Rubelowsky’s in Carbondale. The two consulted over the phone for a few minutes about the best approach to use and complications to watch for, and then Rubelowsky went back to the operating room to perform his first-ever neurosurgical procedure. Fortunately, it was a success.

Upon his return to the U.S., Rubelowsky shared digital photos from the neurosurgery with his friend and colleague. He had taken a laptop computer and digital camera with him and documented his experiences with dozens

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**In a country littered with land mines (some 10 to 20 million of them, according to Rubelowsky), the team treated numerous devastating injuries, including many to children.**



of photos. His gallery shows images of tents, his colleagues in fatigues, wrecked Russian fighter jets, the operating room (surprisingly high-tech for a desert outpost), and other sights of combat. Saddest are the photos of a people decimated by war, oppression and poverty.

“There was a lot of humanitarian work going on,” the surgeon says. “We are the most compassionate army in the world. We may fight you, but then we help you.” The medical team worked long hours under harsh conditions, often traveling deep into the countryside to bring people primary and dental care, inoculations, and other basic treatment. They also volunteered in the hospital in Kabul.

Rubelowsky is ready to go overseas again, if asked. “They can call you back at any time, and if your number comes up, you go,” he says. “I’m very connected to the military and have developed strong bonds with my fellow reservists. I still feel strongly that I want to serve, so if they need me, I’ll be there.”

The surgeon sums up the importance of his role, and the role of all medical reservists, with a quote from Abraham Lincoln: “I conquered the enemy by making him my friend.” ●



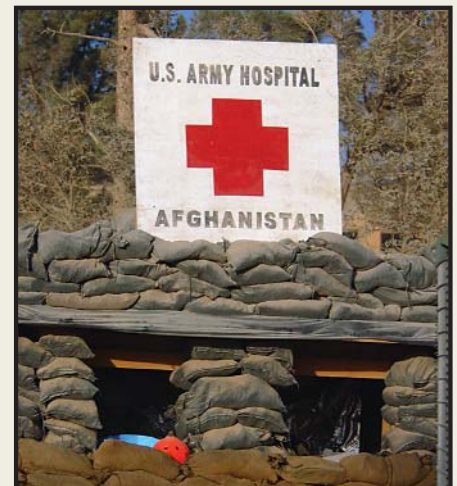
Kenneth Swan, MD

## A Mentor to Many

**KENNETH SWAN, MD**, professor of surgery at NJMS, says, “The military did much more for me than I did for the military.” He entered the Army Reserve on the heels of his older brother, who was ROTC as an undergraduate at Cornell and later left medical school to serve in the Navy.

Swan, who became a reservist as an intern, wanted to go to Vietnam.

Because he had collaborated on some published research, the Army initially assigned him to a surgical research team. “That wasn’t for me,” he says. “I told them I wanted to be in a hospital treating casualties. They couldn’t understand that at all, and even made me see a psychiatrist.” He eventually got what he wanted—combat casualty care duty—and says it was both challenging and





rewarding: “You saw everything—every type of trauma injury you can possibly imagine.”

Swan rose through the ranks, serving three stints in Vietnam and one in Desert Storm. He recently retired as a colonel, after 30 years of service.

“Retirement is mandatory, or I’d still be in there,” he remarks.

Through his years of service, Swan collected reams of information on gunshot wound ballistics, a topic on which he’s become an expert. Being in the military had such a profound effect on him that he incorporated many of his wartime experiences into his lectures. He also became interested in the Health Professionals Scholarship Program (HPSP), which pays for a medical student’s education if he or she agrees to serve in the military afterwards. This too became part of his lectures. “It’s a great program, with advantages for students and the military,” states Swan. “The student gets through medical school debt-free, and the armed forces are guaranteed the services of a well-trained physician. It’s win-win for everyone.”

Rubelowsky believes that over the years, Swan has encouraged some 100 medical students or residents to enlist in

the Reserves. Swan laughingly refuses to confirm or deny the number. “I have no idea how many joined because of listening to me,” he says. “I will say there have been a few in each class, and since I’ve been here an eternity, I guess the numbers add up.”

“When I was a resident, it wasn’t particularly cool to be in the military,” adds Rubelowsky. “But Ken Swan was his own person, serving his country. He was

a role model to many of us.”

Swan has also been a role model for his own children. Two of them became physicians: his daughter graduated from UMDNJ’s School of Osteopathic Medicine and is an obstetrician/gynecologist in south Jersey, while his son is a resident in orthopaedics at University Hospital. Another daughter inherited his love of travel and is now a teacher working in the Far East. ●

## In My Opinion

By Joseph V. DiTrollo, MD ’75

**F**AT AND HAPPY TAKE ON NEW MEANING here in the U.S. Over half the population is overweight, up dramatically over the past few decades. Are we eating more, exercising less or a combination of both? It is almost as though we are sheep led to the golden arches to be fattened for slaughter. At first it appears to be just personal choices, but closer examination reveals a burden on the health-care system. Diabetes, hypertension and cancer have a direct correlation to our expanding waistlines. A good part of our increased healthcare expenses are generated at the dinner table, fast food store or donut factory. Our demanding lifestyle has changed our dietary habits, making fast foods a way of life. Quantity and efficiency have taken precedence over quality. The human diet has changed more in the last forty years than it had changed in the prior forty centuries.

We as physicians should lead by example. Since patients continue to look toward us for guidance, we cannot fail. For if we do, someone—the government—will have to step in to ration care, or worse, go down a path of life-altering legislation through taxation of those items that are deemed unhealthy for society. A large portion of my practice as a urologist is directly related to being overweight. Hands down the number one new diagnosis in my office is diabetes, followed by hypertension. Both are associated with sexual dysfunction and a multitude of cardiovascular complications. As we move toward a universal national prescription drug plan, we may be removing one of the strongest incentives to improve our physical condition. Should we remove the financial incentive to maintain a good physical condition and reduce our medical needs? If we continue down this path, the burden on our system will force a rationing of care. To me, the best way to help avoid this end is to improve the general condition of the population, thereby reducing the per capita expense and allowing a better chance at universal care for a healthier population. Think of all the aspects of our profession that are affected by obesity and how much of our time would be redirected should we not have to treat those illnesses if they did not exist. All it takes is a little will power and moderation. ●



## THE 1960s

**Theodore A. DaCosta, MD'60** writes that two of his four children, all doctors, studied at NJMS. He practices internal medicine and gastroenterology with two of his sons. He and his family are pictured below.



**Philip J. Goscienski, MD'62** retired in 1996 after 33 years in the practice of pediatrics, with a subspecialty in infectious diseases. His newly released book, *Health Secrets of the Stone Age* (New Century Books), focuses on "what we can learn from deep in prehistory to become leaner, livelier and longer-lived."

**Leo M. Pisculli, MD'62** writes that youngest daughter Jenny graduated from Columbia/BGU Medical School in May 2003 and is now a family practice resident at the Dartmouth program in Augusta, ME. Older daughter Nicola is a hyperbaric specialist in Camarillo, CA.

**Joseph A. Cannaliato, MD'63** retired from his Paramus-based pediatrics practice in October 2003. He organized a memorable 40th anniversary reunion celebration for his classmates in the spring of 2003.

**John Merendino, MD'64** retired from the practice of orthopaedic sports medicine and is presently the director and owner of Wasatch Imaging MRI center in Salt Lake

City, Utah. He is still active in skiing and aviation.

**Stephen G. Romeo, MD'64** has been retired for 2 years following a stimulating 30-year career in dermatology.

**Michael R. Volow, MD'64** retired from Durham VA Medical Center, NC after 31 years.

**Dan Rowe, MD'65** retired after 25 years in clinical office pediatrics and his last five years in administrative medicine as Vice President of Medical Affairs at a California community hospital.

**Frank B. Light, MD'66** recently marked his 30th anniversary at Rahway Hospital (NJ). He has served as president of the medical staff and board member, and is currently the Foundation president. For the past 18 years he has run Healing the Children, organizing numerous trips to Thailand, Morocco, Mexico and other countries to provide surgery for more than 4,000 children, and bringing many children to the U.S. from foreign countries for plastic and ophthalmologic surgery.

**Willys C. Treanor, MD'67** writes that their new grandson, Andres Decatur Treanor, was born in March 2003. Dr. Treanor resides in Abilene, TX.

**James R. Phelan, MD'68** is enjoying active duty in the U.S. Navy.

**Bohdan O. Fecowycz, MD'69** has been a practicing radiologist at Trumbull Memorial Hospital in Warren, OH since July 1975. He was president of a group of physicians from 1987 to 1999.

**Mary T. Herald, MD'69** is an internist and endocrinologist in Westfield, NJ. In April 2003 she

took office as chair of the Board of Regents of the American College of Physicians. Dr. Herald is an associate clinical professor of medicine at Columbia University College of Physicians and Surgeons.

## THE 1970s

**Albert L. Ray, MD'70** is the medical director of Pain Medicine Solutions in Miami, FL.

**Donald E. Greydanus, MD'71**, received the 2003 William B. Weil, Jr., MD, Endowed Distinguished Pediatric Faculty Award from Michigan State University College of Human Medicine for "national and international contributions to the field of pediatrics and adolescent medicine." He is also the editor-in-chief of *Caring for Your Teenager, The Complete and Authoritative Guide* (Bantam Books and the American Academy of Pediatrics, May 2003). Dr. Greydanus is Professor of Pediatrics and Human Development at Michigan State University (MSU) and Pediatrics Program Director at

MSU/Kalamazoo Center for Medical Studies.

**Peter J. Kurzweil, MD'71, CMD** has been granted the title of Certified Medical Director in Long Term Care (CMD).

**Matthew G. Ely III, MD'72**, a urologist in a multi-specialty Connecticut surgical group, is active in the University of Connecticut urology residency training program.

**Robert L. Johnson, MD'72**, professor and chair of pediatrics, professor of psychiatry and director of the Division of Adolescent and Young Adult Medicine at NJMS, received the 14th annual William M. Ashby Community Service Award at the United Way of Essex and West Hudson's annual "Breakfast of Champions."

**Steven Ross, MD'72** has been practicing emergency medicine since 1978. His wife Francine is a published author and teaches in the Department of Education at Northern Illinois University. They have three children: a graphic arts

## IN MEMORIAM

**Rodney B. Rosenberg, MD'87** passed away on June 27, 2003 in Hackensack University Medical Center. He was in private practice in New York for 16 years. Born in Buffalo, NY, he moved to Elmwood Park, NJ eight years ago. Surviving are his wife, Judith; a son, Bryan; his mother, Vira Rosenberg; a brother Michael, and a sister, Monica Stiles.

**Robert P. Rossbaum, MD'62** passed away on February 16, 2003 at his home in S. Glastonbury, CT. A former partner in the Hartford Anesthesiology Association, Inc., he retired after more than 30 years of service. He leaves his wife of 48 years, Elizabeth, son Robert Ross, daughter Kathleen and four grandchildren.

**Joseph Russo, MD'71** passed away on July 23, 2003 of pancreatic cancer. He is survived by his wife of 30 years, Karen Filkins, MD'71, children Katie, age 20, Jenny, age 19 and Scott, age 18. Dr. Russo, who practiced obstetrics and gynecology, resided in Marina Del Rey, CA.

## Stay in Touch!

We'd like to hear from you. Mail this form to: Alumni Association of New Jersey Medical School, 185 S. Orange Avenue, P.O. Box 1709, MSB-B504, Newark, NJ 07103-2714. Photos are welcome. You can also send your news via e-mail to: [njmsalum@umdnj.edu](mailto:njmsalum@umdnj.edu) or fax us at (973) 972-2251.

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What I Have Been Doing (enclose photos)		

I would like to be a representative for my class.

### Please join the Alumni Association of New Jersey Medical School.

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Visit <http://njms.umdnj.edu/>, click on **Alumni Association** and then **On-Line Dues Payment** to pay your dues on line.

The Lifetime Membership is now being offered to our alumni as a means to perpetuate the goals of the Alumni Association and enable its members to sustain their support in a more meaningful way. All categories of membership will afford you the opportunity to keep connected with us. You will continue to receive all membership benefits, including *NJMS Pulse* magazine, information about upcoming events and reunions, and library privileges.

designer in New York City, a second-year medical student and a college student. They reside in Oakbrook, IL.

**Aron H. R. Swerdlin, MD'72** writes that daughter Amy started medical school at the David Geffen School of Medicine at UCLA in August 2003.

**Joseph Apuzzio, MD'73** is the chair, New Jersey Section American College of Ob-Gyn and is listed among the 2003 Best Doctors in the New York Metropolitan Area.

**Glen Z. Brooks, MD'73**, chair of the Department of Anesthesiology at Cabrini Medical Center in New York City, reports that two other NJMS alumni are also department chairs at Cabrini: Bob Grossi, MD'81, Surgery, and Joel Wallack, MD'74, Psychiatry.

**Robert Jarmon, MD'73** is a certified divorce and family mediator, specializing in couples and divorce mediation.

**Ida Onorato, MD'73** has been appointed Deputy Director, Division of HIV/AIDS Prevention at the Centers for Disease Control and Prevention (CDC) in Atlanta, GA. This is her 23rd year at CDC.

**Howard Pruzon, MD'74** writes that his daughter, Joey, finished her internship and started her ophthalmology residency at Robert Wood Johnson University Hospital in July 2003.

**Robert M. Carvalho, MD'75** is the medical director of Vista del Mar Hospital in Ventura, CA.

**Otis M. Hastings, MD'75** received the Medical Director of the Year Award for Emergency Professional Services from Team Health.

**Anthony R. Scillia, MD'75** writes that son Anthony J. Scillia is a first year student at NJMS this year.

**Barbara Harmon, MD'76** retired from the Department of Medicine at Harlem Hospital Center in NY in July 2002 and now resides in Chapel Hill, NC.

**Michael La Quaglia, MD'76** has been inducted into the American Surgical Association.

**Stephen C. Blank, MD'77** is about to launch a new product, Ovuscope, which can detect ovulation. It can be seen on the Ovuscope.com Web site.

**John F. Bonamo, MD'77, MS** received a master's degree in health care management from the Harvard School of Public Health and Harvard University. He currently serves as chief executive officer at St. Barnabas Medical Center in Livingston, NJ.

**Donald C. Arthur, MD'78, PhD, JD** is Commander of the National Naval Medical Center in Bethesda, MD and Chief of the Navy Medical Corps. He is board-certified in Emergency Medicine and Preventive Medicine (Aerospace) and is a Certified Healthcare Executive and Fellow in the American College of Healthcare Executives. He is a fellow and past president of the Aerospace Medical Association and member of the Alpha Omega Alpha Medical Honor Society. He was the 2002 recipient of the American College of Healthcare Executives' Federal Excellence in Healthcare Leadership Award and 2002 Association of Military Surgeons of the U.S. Outstanding Federal Healthcare Executive Award. In addition to many other awards, Rear Admiral Arthur has been awarded four Legions of Merit, three Meritorious Service Medals,

three Navy Commendation Medals and a Navy Achievement Medal.

**Anna Koo, MD'78** has been at the Cleveland Clinic since graduation 25 years ago. Originally trained in rheumatology, she now specializes in hematology and medical oncology. She was elected president of the American Society for Apheresis at their meeting in Lake Tahoe in May 2003.

**Anthony Emanuel, MD'79** has been elected Assistant Chief of Staff, CentraState Medical Center, Freehold, NJ.

## THE 1980s

**Ronald B. Staron, MD'82** and **Rosemary Wieczorek, MD'82** celebrated their 19th anniversary this year. They have two children and live in Bayonne, NJ.

**Roger Thompson, MD'82** has been named medical director of Carlos Otis Clinic at Stratton Mountain, VT.

**Jeffrey Zlotnick, MD'82** is assistant director at the Warren Hospital family practice residency program and is active with the NJ Academy of Family Physicians, where he serves as treasurer, and on the Government Affairs and Managed Care committees. He heads the Healthy Athletes Program, a partnership between the Special Olympics of NJ and the NJ Academy of Family Physicians.

**Michael J. Kane, MD'83** has been elected president of the Oncology Society of NJ.

**Susan M. Bator, MD'84** is with the Lancaster General Hospital, PA, as an anatomical clinical pathologist. She is medical director of the blood bank and chair of the pathology department.

**Jose Cortes, MD'84** resides in Alamogordo, NM, where he practices at the Women's Health Center.

**Lawrence Fox, MD'86** is a Captain in the Commissioned Corps of the U.S. Public Health Service, and has been especially active since 9/11/01 in biodefense research, as well as continuing to do research in HIV therapy in the developing world.

**Jeffrey Raskin, MD'87** writes that his family has just welcomed their fourth child, a daughter, who joins her three older brothers.

**Joseph Rubelowsky, MD'87**, a lieutenant colonel in the Army Reserve, was mobilized and sent to Afghanistan, where he served for four months at the 339th Combat Support Hospital at Bagram Air Base near Kabul. His story is featured in this issue of *NJMS Pulse* magazine.

**Richard P. Winne, Jr., MD'87** is an anesthesiologist and practices interventional pain management at Morristown Memorial Hospital in NJ. He lives in Mendham and has three daughters.

**Thomas Fantes, MD'88** is leaving the Navy and joining a group in Newport, RI.

**Leonor Forero-Briggs, MD'88** has been appointed to the department of medicine, division of family medicine, of Easton Hospital, Easton, PA. She is in practice with Easton Area Family Medicine Associates.

**Lauren D. LaPorta, MD'88** has been appointed chair, department of psychiatry, at St. Joseph's Regional Medical Center, Paterson, NJ and was recently named Distinguished Fellow in the American Psychiatric Association. She has also received certification as a master clinician in psychopharmacology.

**Christopher Shanahan, MD'88, MPH**, assistant professor of medicine, has been named unit director for Community Medicine for the Department of Medicine's section of General Internal Medicine at Boston Medical Center (BMS). He is currently Medical Director for the Information Technology Department's C.H.A.R.T. project bringing BMS's electronic medical record to eight Boston HealthNet health centers. He also directs the Transition Opioid Program (TOP) for hospitalized out-of-treatment opiate addicts for BMS and the Boston Public Commission.

**Paul Kovatis, MD'89** became vice president of the Bergen Medical Society.

## THE 1990s

**Felix Dailey Sterling, MD'90** has an interventional cardiology practice in northern NJ. He and wife **Karen S. Mathurin Sterling, MD'95** have three children.

**Michael Abele, MD'91** is now on staff at Lowell Community Health Center in Lowell, MA, after spending two years abroad working on humanitarian endeavors, including Doctors without Borders and an HIV project in southern Africa.

**Minda J. Gold-Vesery, MD'91** is opening a private practice with two other family doctors in Maine, specializing in family medicine with obstetrics. They will also have complementary providers, including massage, acupuncture, chiropractics and counseling.

**Diane Pege, MD'92** is Chief Medical Officer at Sutter Lakeside Hospital, Lakeport, CA.

**Louis LaLuna, MD'92** practices gastroenterology in Reading, PA.

**Vincent Barba, MD'93** and wife Theresa announce the birth of Vincent Edward in April 2003. Dr. Barba is chief of hospital medicine at NJMS.

**Rosanne Giannuzzi, MD'93** plans to marry Robert Stanton of Manhattan in May 2004.

**Michele Fantasia, MD'94**, on staff at the Children's Specialized Hospital in Mountainside, NJ, is board certified in pediatrics, physical medicine and rehabilitation and spinal cord injury medicine.

**Pamela Cailliau, MD'95** and husband Andrew delaTorre, MD, announce the birth of their third child, Ava Nicole delaTorre.

**Ashwini D. Sharan, MD'95** is assistant professor of neurosurgery at the Jefferson Medical College in Philadelphia, PA where he leads the new deep brain stimulation program for the treatment of late-stage Parkinson's disease.

**Holly Abate, MD'96** and **Louis Bersalona, MD'96** have married and have their own internal medicine practice in Sea Girt, NJ.

**Heather A. Erhard, MD'96** is board-certified in general surgery and has completed a plastic and reconstructive surgery residency at Albert Einstein College of Medicine/Montefiore Medical Center. She will continue with fellowship training in breast reconstruction at Louisiana State University in New Orleans and cosmetic surgery at NY Eye and Ear Hospital.

**Ana Natale-Pereira, MD'96** gave birth to a beautiful baby boy, Daniel Eduardo Pereira, in May 2003. She is the new medical director of Focus Community Health Center in Newark, NJ.

**Jeffrey J. Sekula, MD'96** and wife Kristin have moved closer to home after his completion of a urology residency at Duke University.

**Barbara-Ann Britten, MD'97** practices in Hackettstown, NJ and was voted Doctor of the Year at Hackettstown Community Hospital.

**Patrick Hinfey, MD'97** and wife **Yvonne, MD'98** announce the birth of son Connor Patrick Hinfey in March 2003.

**Paul Martinetti, MD'97** was appointed vice president of Digital AXIS, where he will develop and manage E-business initiatives.

**Sarah Jones, MD'98** has finished her surgical residency at Thomas Jefferson University in Philadelphia and is continuing with fellowship training in pediatric surgery at the Children's Hospital of Buffalo.

## THE 2000s

**Robert G. Kayser, Jr., MD'01** is scheduled to begin a cardiology fellowship at Virginia Commonwealth University in 2004.

**Gautam Malhotra, MD'01** is at the Kessler Institute for Rehabilitation in West Orange, NJ. He was married last May and still performs at Follies.

**Janet K. Chen, M'02** has begun residency training in anesthesiology at the University of California—San Francisco.

**Kyle Stier, MD'02** and wife Christy were married in June 2002. He has finished a transitional year at St. Barnabas Medical Center and is continuing his residency in Physical Medicine and Rehabilitation at NJMS.





Robert Johnson, MD

## The New Face of Teenage HIV

**T**HE MOST PROMINENT ITEM, among Robert Johnson's degrees and certificates displayed on a wall in his office, is a super-sized T-shirt inscribed with doodles, drawings, and thank-you's—a gift from HIV infected teenagers. The social issues these kids face are different from children who have grown up with perinatal HIV. "Their lives are unregimented. Some are in commercial sexwork. Many aren't in school consistently or in a home setting, so the idea of taking medication once, or even twice a day, is new. We need to go where teenagers were involved in intense sex talk, which turns out to be the internet. Our Web outreach workers are very successful in encouraging teens in the highest risk categories to get HIV tested." With 80 teenagers enrolled, START is among the largest programs in the country for adolescent HIV, with a 100 percent treatment adherence rate. "Someone goes out in a van, picks up a teen who may have missed an appointment and brings him or her in for treatment." START has revolutionized the approach to adolescent HIV with "one stop shopping—everything from complete medical evaluation to case management and mental health services—is provided in one site without unnecessary paperwork or overlapping services."

## Pediatric AIDS

*continued from page 23*

child may need more medicine because drugs clear through a baby's system faster," says Bardeguéz. Clinical testing of HIV medications in children has lagged and there is no Food and Drug Administration (FDA) approved pediatric labeling for some commonly prescribed drugs. Yet, the good news is that 20 years ago an HIV infected pregnant woman had a 20 to 40 percent chance of passing the virus to her child. Now, the transmission rate is down to 2 percent and the oldest child born in the NJMS/UH program is almost 25.

Bardeguéz has also been working with some reproductive endocrinology specialists to develop criteria in order to provide protocols for assisted reproductive technology in HIV-positive individuals who want the best possible pregnancy outcomes while reducing the risk of transmission to partner and infant. Simply telling an HIV couple to forgo ever becoming parents is not a fair option, she says. Look at the corps of perinatally infected children who are now young adults. "We have had about 10 patients, born here with perinatal HIV, who got pregnant, gave birth and are okay. Yes, I've managed them and yes, they were difficult cases," she says.

## Oleske's Legacy

There's a photo in James Oleske's office of 10 young people happily posing on either side of the doctor. He's proud of the picture. In it, a young woman leans into him, resting her body against his seated frame. She's obviously comfortable there.

Pick it up to study the smiling faces.

"Those children in the photo are an interesting story," he explains. "It was a reunion shot taken not so long ago." These 10 participated in a clinical trial conducted at NJMS to test a

therapeutic vaccine for HIV. The course of this innovative therapy, developed in a NJMS business partnership venture with Bio-Delivery Sciences International, Inc, began in 1995 and continued for 104 weeks. Each participant received 44 doses of a vaccine based on his or her own particular HIV virus and cells, and designed to stimulate a stronger immune response to that specific virus subtype.

"All these children are doing very well because we were thinking out of the box," Oleske insists. "There needs to be more innovation for the long-term defense against HIV because developing and testing new drugs is exhausting and expensive. Then, tremendous effort is required of patients, parents and the medical system to assure long-term adherence. We need vaccines," he says. An application to repeat and expand this vaccine trial is pending with the FDA.

Look again at the girl leaning toward Oleske in the picture. "Who is she?"

She (and her identity must remain secret) is the same girl he met 24 years ago when she was one of his HIV-positive babies, explains Oleske. Her hospital chart was marked DNR for Do Not Resuscitate and she was that close to death.

"Really?"

"Yes, that's her," he says.

Suddenly, you can understand the reason for her smile and the close attachment to the doctor who threw her a lifeline. ●

## Ellise Delphin's Tale of Two Cities



**T**HE NEW CHAIR OF THE NJMS ANESTHESIOLOGY DEPARTMENT RISES EARLY, leaves her home in Manhattan on weekdays by 6 a.m. and arrives here in Newark before 7. Going home at night can take longer on occasion, but that's okay. Ellise Delphin, MD, MPH, is in the right city at the right time of her professional career.

Delphin's extensive CV places her unquestionably in the heart of New York City's most prestigious medical communities and at the top of both clinical and administrative ranks. Except for time spent in Guatemala in 1995–96 directing the anesthesiology leg of a group on a pediatric cardiac surgical mission, she's never practiced anywhere else in the world but Manhattan island. She completed her medical education at Columbia University's College of Physicians and Surgeons where she eventually became professor of clinical anesthesiology. At New York University School of Medicine, Delphin was Director of Medical Education and she also served as co-chief of Cardiac and Thoracic Anesthesia Services at both Tisch Hospital–New York University Medical Center and Bellevue Hospital Center. In fact, Delphin had more than enough reasons to stay on the other side of the Hudson River. Yet, the new chief, a master at multi-tasking, who arrived last February and holds both her MD as well as a Masters in Public Health (MPH), is more than happy to make this commute.

"I've worked at much older institutions and this position represents an opportunity for me to build something new and vibrant," she explains. "I came for an interview in the summer of 2002 and while I had researched the University and was aware of its resources, I was still impressed by the physical plant."

Delphin didn't start out as an anesthesiologist. After an internship in pediatrics at Babies and Children's Hospital, part of Columbia Presbyterian Medical Center, she realized, "The thing I enjoyed doing the most in pediatrics was critical care. Since there were only one or two pediatric intensive care fellowships at that point back in 1978, I decided to do an anesthesiology residency. I ended up loving anesthesia more than critical care."

Thoracic lung reduction surgery is a research area that has been rewarding for Delphin. She participated in a large, longterm, multi-center National Institutes of Health (NIH) clinical trial to determine whether this surgery was a worthwhile option for pulmonary disease patients.

Her MPH in health policy and man-

agement services was earned at Columbia University School of Public Health in a two year program which required long Thursday-to-Sunday weekends of class, with no summer breaks, and "lots of homework in between," she explains. When did she sleep? "Never," she admits. Later, she took on the role of coordinator of the MD–MPH Program and organized a series of short courses for physician executives focused on leadership skills.

UMDNJ's UH is the major Level 1 Trauma Center in northern New Jersey, where approximately 13,000 anesthetics are administered each year to critically ill, challenging patients in 12 operating rooms. From high risk obstetrical, neurosurgical, orthopedic, cardiac, and vascular cases to critically ill people suffering with AIDS, TB, or victimized by violence, the anesthesiologists and residents under Delphin face a daily range of situations nearly unmatched medically anywhere else. "One of the wonderful things about this hospital is that we take care of the underserved population without question," she says. The experience is well worth the trip across a river, from city to city, even though she is married to heart surgeon and Columbia classmate, Eric Rose, MD, and is the mother of four children. "It is very important for young women pursuing medical careers to know that there are resources available to help make their personal and professional lives workable," she says. "My door is open." ●

—Maryann Brinley

# Keep in Touch

*Our faculty welcome your comments, suggestions and observations. We have provided email addresses for faculty members featured in this issue and have included patient referral contact information where appropriate. We look forward to hearing from you.*

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## *Patient Referrals*

**Orthopaedic Oncology Division:** 973-972-2153

**Liver Transplant Program/Division of Transplant Surgery at University Hospital:** 973-972-7218

**Pediatric Allergy/Immunology/Infectious and Pulmonary Diseases:** 973-972-0380

**Prenatal Diagnosis and Infectious Diseases:** 973-972-2700

**Institute of Ophthalmology and Visual Science:** 973-972-2065

**Psychiatry Department: ECT Treatment:** 973-972-7117

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