

New Jersey Medical School

University of Medicine and Dentistry of New Jersey

Volume 9 Number 1 Winter 2011

pulse

# UMDNJ's New Board Chair

Discoveries of the Decade

Lyme Disease Secrets

Heart Attack Breakthrough

*Kevin M. Barry, MD'87, MBA*

## Q & A with the Dean

Welcome to the winter 2011 edition of *Pulse* magazine, which showcases the tremendous ways students, faculty, investigators, and staff shine academically, scientifically and clinically. Their remarkable accomplishments and diverse interests make NJMS everything a medical school should be and more. The pages that follow offer recent success stories, including an internationally endorsed diagnostic test for tuberculosis, a life-saving technology for heart patients and an array of published research. This Q&A focuses in particular on scholarships.

*What message would you like to share about New Jersey Medical School?*

The NJMS community commemorated the 50th anniversary of the inaugural class last year. This May, I look forward to greeting graduates during our alumni weekend (May 13 – 15) when the classes of '61 and '86 celebrate their 50th and 25th anniversaries respectively. Reunions are a wonderful opportunity for alumni to celebrate past and current achievements at their alma mater.

In addition to my role as interim dean, I enjoy my clinical work as a pediatrician. I have always been an extremely proud graduate of the NJMS class of '72. Although medical education has evolved, being able to pay for it has always been on the minds of medical students. I know how important scholarships are to each recipient. As the economy slowly rebounds, we are determined to expand scholarship support for NJMS as well as the Graduate School of Biomedical Sciences (GSBS) at NJMS students. We extend our heartfelt appreciation to the alumni and friends for their generous contributions.

*How do donations for scholarships make a difference?*

Every gift is essential. When one scholarship recipient visited our Alumni Association office to express appreciation, he explained that the award was worth much more than the monetary value of the gift. It helped reduce his financial debt and also provided relief from incurring additional interest. Scholarships for books, supplies, and, of course, tuition make such a difference for our students.

*What is the first step towards making a donation?*

Establishing a scholarship is one way to support a key mission of the school—education. Financial support is also critically needed for summer research programs, which provide opportunities for high school and college students to participate in rigorous scientific research.

Anyone interested in making a donation to NJMS should contact Dianne Mink, director of the Alumni Association (973-972-6864) or



Inya Chehade at the Foundation of UMDNJ (973-679-4686). Ms. Mink can highlight the benefits of Alumni Association membership, describe volunteer opportunities, arrange campus tours and offer other ways to help. Alumni from GSBS at NJMS who are interested in donating are encouraged to contact Elizabeth Ketterlinus at the Foundation of UMDNJ (973-679-4684).

Contributions can be designated to departments, programs or students entering a particular specialty. A donor who establishes a scholarship can also choose to participate in selecting a recipient. Gifts from *Pulse* magazine readers can be a source of encouragement to the next generation of physician-clinicians and scientists.

**Robert L. Johnson, MD, FAAP**

*The Sharon and Joseph L. Muscarelle Endowed Dean (Interim)*

## pulse

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## When Students Interview Students

Christina Gutowski and Nikhil Thaker, fourth-year students and founding directors of the NJMS Student Admissions Interview Program, were very aware of the challenges prospective students face when applying to medical school. They established a program in 2007, with the support of the Office of Admissions, to enhance the interviewing experience for prospective students, to bring a personalized approach to the process, and to provide additional information to the Admissions Committee.

With the guidance of Barbara Fadem, PhD, professor, psychiatry, and George Heinrich, MD, associate dean, admissions, Gutowski and Thaker conducted a study to evaluate what current medical student interviewers can add to the admissions process. Their findings, which included the work of 22 student interviewers, were published in *Medical Education Online*.

For the research, 36 medical school applicants were randomly selected. Both student and faculty interviewers evaluated the candidates based on seven criteria: motivation, medical experiences, personality, communication skills, outside interests, overall evaluation, and overall numerical score. “Medical student and faculty interviewers gave applicants equal overall scores but the students

provided two to three times more written information about applicants’ personalities, communication skills, extra-curricular interests and motivation,” Fadem says. “In addition, when it came to each applicant’s communication skills and motivation, medical student interviewers provided 60 percent more specific examples.” These outcomes may be due to a student interviewer’s ability to relate to an applicant’s academic and interpersonal experiences.

The program now has 119 second- to fourth-year student interviewers for this academic year and is being led by coordinator Leila Mady, a fourth-year MD/PhD/MPH student. Mady, in collaboration with the Admissions Office, is developing a team of student interviewers with the kind of insight to pick the next generation of medical innovators and leaders. ●

“I think there are a lot of clues... we just need the right Sherlock Holmes.”

Eric Altschuler, MD, PhD, on the phenomenon and study of why one in every 300 HIV patients can control the virus without medication, never getting AIDS



**ANN CHUANG** and **ALOPI PATEL** participated in the Foundation for Anesthesia Education Research (FAER) Medical Students Anesthesia Research Fellowship program, working with **MARCELINO POTIAN, MD**, and **MELISSA DAVIDSON, MD**.

**DENARD COLEMAN**, director, The Waiting Room Parents/Adolescent Youth Development Program, was selected for a Robert Wood Johnson Foundation “Ladder to Leadership” fellowship.

**JOEL DELISA, MD, MS**, professor and founding director of the Kessler Foundation Research Center, is being honored for his 20 years of leadership with a \$50,000 annual award in his name to be given to a physician or scientist making an impact on physical medicine and rehabilitation. The first winner will be announced in May.

Fourth-year med student **ANDREW ELDEN** co-authored a study on amyotrophic lateral sclerosis which was published in *Nature*.

**JOHN GREMBOWIEC**, associate director, EMS, got a certificate of appreciation from the New Jersey Office of Homeland Security.

**NIKHAT PARVEEN, PhD**, assistant professor, microbiology and molecular genetics, received a one-year, \$367,000 award from the National Institutes of Health (NIH) to study syphilis.

**CHUNXIANG ZHANG, MD, PhD**, associate professor, and **YUNHUI CHENG, PhD**, research associate, anesthesiology, won a Best Manuscript Award from the American Heart Association.

**XILIN ZHAO, PHD**, Public Health Research Institute, received the NIH Director’s New Innovator Award.



## Tough Mudder

Picture an obstacle course of 12 miles which includes jumping into 40 degree water, crawling through mud under barbed wire, running through fire, and sprinting through live electrical wire. Known as “Tough Mudder,” this contest proclaims itself as “probably the toughest event on the planet,” and is held across the country on different dates. In November, NJMS med students on two different teams participated in the longest and largest contest ever held in Englishtown, NJ. According to Stephen Dunay, a second-year student, “It’s a test of all-around strength, stamina, mental toughness, but most importantly, camaraderie.

The goal is not to finish in a certain time but rather to complete the event while helping your fellow participants. This challenge is more mental than physical but everyone on the course is willing to lend a hand to

other ‘mudders.’ Those hills of mud seemed endless,” he says. “Most of us probably had moments when we wanted to quit but pushed through because others motivated us to keep going.” Participating students included: Erica Pimenta, Andrew Nguyen, Richard Schmidt, Zain Boghani, Matthew Hanlon, Zeeshan Nayeemuddin, Collin Creange, Michael Doctor, Ray Malapero, Jared Emelo and Avi Ruderman. For information about the next event, check out: [www.toughmudder.com](http://www.toughmudder.com). ●

## NJMS News by the Numbers

### 600+

Alumni, students, faculty, and supporters are now fans of the NJMS Facebook page. For the latest news, join this community.



### 47

Physicians named Top Docs by *New York Magazine* through a vote by their peers



### 2

New Master Educators recognized on University Day in September: Neil Kothari, MD (left), NJMS assistant professor, medicine, and Stephen Garrett, PhD, assistant dean, UMDNJ-GSBS and an NJMS associate professor

### \$1 million

Five-year grant awarded to NJMS–UH Cancer Center by the National Cancer Institute for its innovative interdisciplinary training which provides hands-on clinical experience and lab research

### \$6 million

To be shared by six researchers around the world, including NJMS Professor of Neuroscience Steven W. Levison, PhD, to study newborn stroke. This Transatlantic Network of Excellence grant was funded by Fondation Leducq, which forges scientific alliances that transcend national borders.



### 200

One-pound mirrors that cost \$16 each distributed to survivors of the Haitian earthquake who lost limbs. Mirror therapy can relieve phantom limb pain (itching, tingling and cramping), which is why NJMS neuroscientist Eric Altschuler, MD, PhD, and the group Unified for Global Healing towed them there to give away.

### \$225 million

Funds from a five-year grant from the U.S. Agency for International Development to be shared by The Global Tuberculosis Institute and other groups

### 40

Second-graders learn bike helmet safety at the Eric Munoz Trauma Center at UH.





## Learning to Be Old

Among the 514 elderly patients at the Jewish Life Care Nursing Home in New York City last summer was Soo Chong Kim. “I had never been on a stretcher before,” admits this fourth-year med student. With a “diagnosis” of stroke on the right side, Kim spent a week and a half in the facility learning just what it’s like to be an elderly, frustrated, lonely, uncomfortable patient. She even struggled to knit with one hand because she was pretending to be paralyzed on one side. The intense, real-life course, “Learning by Living ©,” was started five years ago by Marilyn Gugliucci, PhD, a geriatrician at the University of New England, who believes that it’s important to put med students “in the shoes, in the wheelchair and living the life” of geriatric patients over an extended period of time. “That’s the key,” Gugliucci says. It sure worked for Kim, who hopes to go into geriatrics.

“As a medical student, I had focused strictly on disease and its treatment. As a patient, I was faced with more humanly raw emotions. My dignity was shattered when I was stripped completely naked. I felt helpless needing assistance to the bathroom, incompetent when I struggled with my wheelchair and shame when I was changed into a diaper. I came to understand the

## Memory Boxes

For mothers who have experienced a miscarriage or stillbirth, the grief process can take months, even years. Angelie Mascarinas, a fourth-year student and scholar at the Healthcare Foundation Center for Humanism and Medicine, has been using her passions for art and community service to help these families cope.

During her rotation through UMDNJ–University Hospital’s labor and delivery unit, Mascarinas noticed that memory boxes, designed by local artists like Kimberly Taylor, were presented to mothers who had lost babies during childbirth. Deeply moved by the cause, she started her own memory box project to give parents keepsakes. With the support of the Humanism Center and Diane Kaufman, MD, assistant professor, psychiatry and pediatrics, Mascarinas created 12 memory boxes with local children and adults during the Healthy Kids Fair at the “Y.”

According to Mascarinas, “The children understood that the boxes were for parents of stillborn babies.” The boxes contained baby pictures, decorative paper for babies’ footprints, height and weight, and poems with the theme of losing a loved one that were selected by Mascarinas and Kaufman, a poet and child psychiatrist. Arrangements for boxes to be available in labor and delivery were made by Lisa Pompeo, MD, associate professor, OB-GYN, and Cathy Boyd, RN, MSN, nurse manager.



Mascarinas, Michelle Chi, a first-year student and humanism scholar, and Garrell Middleton (*left, with Rebecca Pinnelas*), an Arts High School student and Hispanic Center of Excellence summer youth scholar, are now recruiting others to help design boxes.

UMDNJ’s Circle of Life Children’s Center (COLCC) also gives out memory boxes. Naimah Campbell-Jenkins, RN, BSN, a nurse clinician and Sheila Walsh, RN, APN, both in pediatrics, meet with parents, provide bereavement support, and offer memory boxes. Jenkins says, “It makes me realize that life is really precious.” ●

impatience and uncertainty of waiting to see a doctor or a nurse or having to be wheeled to yet another therapy session. As I listened to the stories of the elders, I began to see them for more than their age and disease. George, age 86, was a comic book artist who showed me his sketches of Superman and Iron Man. Bob, age 98, was a history buff who sang songs from his youth in a lovely tenor voice. Larry, one of the youngest at age 78, was a war veteran who regularly greeted me in Korean and would vividly recall all the Korean cities he had been stationed in as a soldier. The residents and I

quickly formed a bond of trust as I could relate to their current situation. I, too, was unnerved by the piercing quiet, the loneliness from being away from family, and constant worry. As a physician, I want to go beyond establishing the correct diagnosis and treatment; I want to provide a patient-centered approach encompassing the emotional and physical aspects of care.”

Kim recorded her experience there each evening for CBS News including her teary farewell to fellow residents. ●

*Section compiled by Maryann Brinley and Christina Brown*



# A CLOSER LOOK TOP DISCOVERIES OF THE DECADE

*Pulse* magazine asked University administrators to look back over the last 10 years and tell us which NJMS discoveries stand out. Here are three huge breakthroughs.

BY MARYANN BRINLEY

## A Transformational TB Test

David Alland, MD, chief, Division of Infectious Disease, designed and developed a revolutionary, diagnostic tuberculosis (TB) test that is fast, cheap and clinically effective anywhere. This can be used in a doctor's office, a clinic or just about everywhere in the world of public healthcare medicine. Alland, who has been working on rapid tests for TB since 1988, led the research, which has performed well in large-scale field trials. The work was done in collaboration with Cepheid, a molecular diagnostic company based in California, and the Foundation for Innovative New Diagnostics (FIND), which designed and supervised the study. Grants from the National Institutes of Health and FIND supported the work which took years for Alland to complete.

In less than two hours, what might look like a harmless cold or cough can be diagnosed as a clear-cut case of TB with the Xpert MTB/RIF test. The World Health Organization (WHO) formally endorsed the test in December, recommending that it be used to replace smear microscopy in HIV-positive patients and those suspected of having multi-drug resistant tuberculosis. The Xpert MTB/RIF is the first test in more than a century to replace the microscope as the primary means for detecting tuberculosis.

Active TB is easy to misdiagnose. Older tests relied on skin, blood cultures or sputum smears. A culture could take from seven days to several months to complete and a correct diagnosis of active TB might also

require a complete physical exam, chest X-ray, and looking at the lung using a bronchoscope. Meanwhile, TB spreads easily through the air in droplets expelled through coughing.

This 4,000-year-old germ, *Mycobacterium tuberculosis*, is responsible for killing nearly two million people a year. So in this era of regular global travel, multi-drug resistant (MDR) TB strains, and epidemic numbers of HIV immune-compromised individuals who are more susceptible to TB, this fast, inexpensive, portable test had been an urgent public health need. Individuals from Lima, Peru; Baku, Azerbaijan; Cape Town and Durban, South Africa; and Mumbai, India participated in the study, titled "Rapid Molecular Detection of Tuberculosis and Rifampin Resistance," which was published in the September 1, 2010 issue of the *New England Journal of Medicine*. Alland, who is the interim director of the UMDNJ Center for Emerging Pathogens, says, "The test also indicates rapidly whether difficult-to-treat, drug-resistant forms are present."

Gwen Mahon, PhD, director, Office of Research and Sponsored Programs (ORSP), says, "For the first time, this test makes it possible to detect tuberculosis at its point of care, directly from a clinical sputum sample. Dr. Alland's work sets the bar that all future point of care tests for infectious disease will be compared to." Not completely surprised by his success, he admits that there were times along the way that he "didn't think it



was going to happen at all."

Credit for this new TB test must also go to a long list of collaborators but especially: Danica Helb and Elizabeth Story at UMDNJ; Fred Kramer, Sanjay Tyagi, and Hiyam El-Hajj at the NJMS–Public Health Research Institute (PHRI); Bill McMillan, Martin Jones, David Persing, Emily Windean at Cepheid; Amy Piatek and Michael Levy at Montefiore Medical Center; and Mark Perkins at FIND.

## Glucose Sensors in the Brain

Diabetes and obesity are taking a huge toll on health in the developed world. For more than a decade, Vanessa Routh, PhD, Barry Levin, MD, and Joseph McArdle, PhD, have studied the mystery of how the brain senses and responds to the body's metabolism. Routh, professor, pharmacology and physiology, and Levin, professor, neurology and neurosciences, published "The role of the brain in energy balance," in the *American Journal of Physiology* in 1996. In citing this ground-breaking research, ORSP Director Mahon also pointed to a

*Continued on page 6*



David Alland, MD

# A CLOSER LOOK TOP DISCOVERIES

study published by Levin, Routh, and McArdle, professor, pharmacology and physiology, in the journal, *Diabetes*, in 2001, that described how specific neurons in a part of the hypothalamus are activated by glucose and another subset of neurons is inhibited by glucose.

“We have only to read the news or look around us to know that obesity and Type 2 diabetes mellitus are serious health issues,” says Routh. “In fact, obesity and its comorbidities (heart disease, hypertension, stroke and cancer) are the second leading cause of death in the U.S.” It would be easy to blame lifestyle choices and poor dietary habits alone for this epidemic but Routh and her colleagues have found other factors in the brain. “Most people probably do not suspect that their brain is at fault for their increasing waistline or diabetes, but there is no doubt that the brain plays a major role in regulating energy homeostasis. Moreover, growing evidence indicates that dysfunction in the way that the brain senses nutrients contributes strongly to the development of peripheral insulin resistance.” Glucose, a sugar energy source and the most versatile of fuels, is highly preferred by the brain.

Routh’s overall hypothesis is that maintaining energy balance is a critical function of the brain. “We are particularly interested in specialized glucose-sensing neurons that respond to nutrients (glucose, lactate and fatty acids) and hormonal changes. And, we’ve shown that the glucose sensitivity of these neurons follows changes in peripheral energy status in both health and diabetes. Dr. Zentau Song, a member of our team, and I were the first to characterize glucose-sensing neurons in the presence of glucose concentrations which would be seen in the living brain during normal daily fluctuations, as well as during diabetes,” Routh explains.

“Most people would not suspect that their brain is at fault for their increasing waistline or diabetes but there is no doubt that the brain plays a major role...”

“My lab studies the neuromuscular junction,” explains McArdle. “This synapse is altered in diabetes. Understanding the molecular basis of how diabetes alters this junction will provide insight into the way this disease affects the brain and other aspects of human behavior including eating. Common sense and logic suggest that diabetes alters the supply of energy to synapses.” Yet, McArdle says that it’s remarkable that no one has yet determined the energy required to operate or to change a chemical synapse (what is actually happening in learning, for example). He also points out that there is a great deal of other important work being done at NJMS on understanding and preventing diabetes.

Their long-term goal is to understand the cellular mechanisms underlying these sensors and to learn how they become dysfunctional during obesity and diabetes. “For the past 25 years,” adds Levin, “we have searched for the biological factors that predispose individuals to become obese and for the underlying reasons why so few can maintain weight loss after they become obese...Our studies have shown that there are genetic, neurological and metabolic causes for this resistance to permanent weight loss.” His work has shown that the best time to prevent or ameliorate the development of obesity may be very early in life. “One finding in rodents is that early onset exercise might help prevent the onset of diabetes,” Levin says.

## New Approach to Heart Failure

Recognized as a world leader in the field of cardiac growth and survival signaling, Junichi Sadoshima, MD, PhD, discovered a novel approach to medical treatment for heart failure. “Heart failure is the number one cause of death in this country and is



Junichi Sadoshima, MD, PhD

usually accompanied by enlargement of the heart, which is mediated by a mechanism involving what are called histone deacetylases (HDACs). Our work was the first to show regulation of the function of this HDAC by protein oxidation.”

In life, your body constantly interacts with oxygen as you breathe and as cells produce energy. Unfortunately, research has shown that these very natural processes produce highly reactive molecules known as free radicals, which can cause oxidative damage. To counteract this damage, the body manufactures anti-oxidants to defend itself. However, that ability to create anti-oxidants naturally is controlled by genetic makeup and influenced by environmental factors. Sadoshima’s research focused on cardiac hypertrophy (heart enlargement) but oxidative damage is implicated in cancer, Alzheimer’s, and symptoms of aging.

Collaborating with postdoctoral fellow Tetsuro Ago and assisted by Hong Li, PhD, and Tong Liu, in the proteomic core facility, Sadoshima, who is a professor and executive director, Cardiovascular Institute, explains that the team found a small molecule, thioredoxin 1 (Trx1), that acts like an anti-oxidant and inhibits cardiac enlargement under stressful conditions. This breakthrough research was published in *Cell* and supported by a grant from the NIH and the Fondation Leducq Trans Atlantic Network. Sadoshima started his career in Japan at Kyushu University where he earned both his MD and PhD. After spending time at Harvard Medical School, the University of Michigan and Allegheny University of the Health Sciences in Pittsburgh, he arrived at NJMS in 2000. ●



# A CLOSER LOOK THE HEALING POWER OF CREATIVE ARTS

Do art, music, poetry, writing, photography, dance, drama and pottery belong in a hospital? Yes, of course, says this team of healthcare experts. Such life-enriching activities actually help patients get well. **BY GENENE MORRIS**

It's almost noon on a Tuesday morning in October and Bruno Lee has just finished playing inspirational melodies on his trumpet. He is smiling with good reason.

Thanks, in part, to Lee's efforts, his audience, an intimate group of UMDNJ–University Hospital (UH) patients, is on the mend. At least once a week, the payroll technician for UH's Nursing Department visits the Planned Activity, Less Medication (PALM) Room on D-Level to serenade its occupants. Lee knows that with the rise and fall of each note, his trumpet possesses magical powers that transport patients to a hip lounge somewhere. There, they escape their troubles and bask in the soothing sounds of the jazz, reggae, R&B, gospel and classical music emanating from Lee's instrument.

"I really believe in the healing power of music," Lee says as he returns his brass companion of more than 20 years to its case. Though he is not a healthcare professional, he relishes the supporting role he plays in the recovery of the PALM Room patients.

This PALM Room is the latest example of administrators at NJMS and UH using creative arts to empower and heal patients. Created in 2008 with a \$35,000 grant from the Van Ameringen Foundation to provide monitored activities like music therapy and yoga for brain-injured and cognitively-impaired patients, the PALM Room is the brain-child of Theresa Rejrat, RN, vice president of patient care services and chief nursing officer at UH. Open 16 hours a day, seven days a week, it accommodates 10 patients at a time. Since its inception, notes Rejrat, the program has evolved to cater to patients battling depression, anxiety and loneliness.

A unique aspect is that it's managed solely by nurses, Rejrat says. Judy

Colorado, RN, executive director for patient care services, oversees day-to-day functions and employs five nursing assistants: Theresa Hamilton, Carol Henry, Patricia Austin, Martina Nutsukpui and Carolyn Taylor.

Some of the biggest challenges healthcare providers grapple with are behavioral issues that brain-injured patients display, Rejrat notes. "If they are confused or disoriented in any way, they are more prone to injure themselves or leave the unit." Typically, this results in a patient needing to be restrained or assigned to an aide, Rejrat says. "This is really contrary to nursing philosophy in helping people to regain their independence, to restore their ability to take care of themselves and to become productive members of their community."

Recognizing the value creative arts plays in treatment, Rejrat and Colorado, musicians in their own right, worked with Diane Kaufman, MD, director of creative arts in healthcare, assistant professor, psychiatry, and a child psychiatrist at UMDNJ–University Behavioral Healthcare, to expand the PALM Room programs. For example, in April 2010 during the second annual Poetry in Medicine Day at NJMS, patients were encouraged to write and discuss poems relating to their illnesses. PALM Room participants are also treated to two-hour sessions on Tuesdays, Wednesdays and Thursdays with a storyteller, a painter and a writer from the Wellness Arts and Enrichment (WAE) Center of the Jewish Service for the Developmentally Disabled in West Orange.

Since its opening, Rejrat says that not only have patients found a place to go to get away from their hospital beds, but there has also been a reduction in the use of restraints and medications, decreased patient injuries, and improved sleep habits.

Colorado and Rejrat plan to bring a ceramacist to teach pottery and to expand music therapy through a partnership with Montclair State University's School of Music. They are also developing a "CD Pharmacy" for patients, not just those who frequent the PALM Room. Patients will pick from more than 250 compact discs that were donated by the nonprofit Musicians On Call, Colorado says.

This is gratifying for Kaufman, a longtime champion of creative arts in healthcare including music, art, poetry, dance, drama, and psychodrama therapies. These initiatives are "life enriching," she says. They are also growing in popularity. According to a 2009 report by the Society for the Arts in Healthcare, 45 percent of healthcare institutions surveyed in 2007 (hospitals, long-term care facilities, hospice and palliative care organizations) offered arts programs. That's up from 43 percent in 2004.

*Continued on page 8*

Bruno Lee



## A CLOSER LOOK HEALING POWER



Bruno Lee, Theresa Rejrat, and Judy Colorado

“You’re in a hospital because your life has been compromised. Your body is not working the way that it should...I know what the arts do. They bring things back into balance,” says Kaufman, who took part in a Hospital Artists-In-Residence Program at The Creative Center in New York last fall. “This is life enhancing. Self-expression is about pain and loss but self-expression can also be about growth and thankfulness for a new day.”

Under Kaufman’s guidance, the Creative Arts in Healthcare Initiative sprouted legs in 2009 with the inaugural Poetry in Medicine Day. And in January 2010, the Creative Arts in Healthcare Grand Rounds made its debut. Held each month, these Grand Rounds have tackled topics like “The Effective Use of Music with Patients in the Hospital Setting,” and “A Journey Toward Healing: Using Photography to Explore Relationships, Illness and Death.” Special guests have included renowned poetry therapist John Fox; WAE Center Founder and Director Marilynn Schneider; and Academy Award winning director Roger Ross Williams, who won the Oscar for *Music by Prudence*. Upcoming Grand Rounds presentations include one on the Museum of Modern Art’s Alzheimer’s Project.

Healing, Kaufman notes, is not just for patients. Two other programs—Lifelines and AIM-HI (Arts in Medicine Health Initiative)—are geared toward preserving

the well-being of healthcare workers and students. Lifelines, a bi-monthly, confidential creative writing and support group, allows nurses to express themselves and be heard. “If you’re in healthcare to help the hurt in you somehow, doing more and more can be excellent for your patients, but your own pain must be heard and cared about, too.”

**“I know what the arts do. They bring things back into balance,” says Kaufman.**

AIM-HI is run by students, says Cynthia Hung, an officer of the group. “I never really thought doing art was that important but then I heard about Dr. Kaufman’s proposal. I realized creative expression is an important part of life. Not only does it relieve stress; it builds confidence.” The organization meets every month when students take part in hands-on as well as lecture-based creative arts workshops, including poetry sessions. Says Hung, “We also try to bring more artistic activities for patients” in the PALM Room.

Kaufman, a poet herself and poetry therapist-in-training, developed a full agenda of events last November to celebrate the Society for Arts in Healthcare’s Arts and Health Month. She brought acclaimed poet Annie Freud, great granddaughter of renowned psychiatrist Sigmund Freud, as well as Dominic Chianese, a multi-talented performer who played “Uncle Junior” on HBO’s *The Sopranos* and is the founder of Joy Through Art Foundation, to serve as creative artists in residence. At the first National Symposium for Arts in End of Life Care in London and the Film and History Conference in Wisconsin, Kaufman also delivered presentations with clinical ethicist

Helen Blank, PhD, on their NJMS elective, “Creative Arts in End of Life Care—From Diagnosis to Death: Essential Communication Skills for Seriously Ill Patients.” This course integrates the film *Wit* starring Emma Thompson with instructive materials and art-inspired reflective exercises. Kaufman looks forward to having a Creative Arts in Healthcare Department and more programs focusing on end-of-life care and bereavement support.

Back in the PALM Room, the reggae song, “Night Nurse,” by Gregory Isaacs is quietly playing. The room displays patients’ artwork. Heart-shaped cut-outs adorn the walls and plants in decorated flower pots sit on the window sill. A man prances around under the watchful eye of Theresa Hamilton, the nursing assistant. He is wearing a tee-shirt, shorts and hospital-issued socks. On this day, he is not a patient but a prize fighter, however, courtesy of Wii™ Boxing. He faces his opponent and readies himself for the bout. He bobs and weaves and then unleashes a barrage of left and right jabs that dazes his opponent. After several minutes of sustaining crushing body shots, the opposing fighter sways hard to the right before falling to the mat. The referee counts to 10. The words “Knock Out” flash across the screen. The imaginary crowd cheers. More than an electronic game, this play and the patient’s involvement are all Hamilton needs to keep going. “He’s been in the hospital awhile,” she says nodding in the man’s direction. After suffering a serious brain injury, she says, “He wasn’t able to move.” His recovery “encourages us to come here every day.”

Perhaps just as striking as what Wii can do for healing is a journal that’s kept in the room for patients to document their feelings: “It was destiny that brought me to the PALM Room,” one wrote. “The meaning of the PALM is the same yet different for all of us but one thing is for certain—we are all one family and we share the good and the bad. From enjoying the times...to just listening to the trumpet, the PALM Room brings peace of mind and happiness.” ●

## A CLOSER LOOK THE LANGUAGE OF LOVE

The simple but colorfully striking booklet, titled “The Volunteer Medical Interpreter Program,” is only 10 pages long but speaks volumes. With fluencies in languages as diverse as Bangla, Chinese, Farsi, Kiswahili, Malayalam, Marathi, Russian, Sanskrit, Tamil, Telugu, Tigringya to Ukranian, Urdu, Yoruba and Zulu, UH employees volunteer every working day to come to confused patients’ rescues. After all, if you can’t speak the language, you are lost. These volunteers are doctors, nurses, technicians, patient transporters, therapists working in the finance department, the mailroom, the pathology lab, the newborn nursery, and they race from all over the hospital and medical school when they get that call. They do it for lots of very good reasons, but one in particular. **BY JENNIFER SALVATO DOKTORSKI**

“People act like you’re heaven sent,” admits Maryam Chebli Boukili. “You’re not the doctor, you’re not the nurse, but you make a huge difference to them while they are here.” Chebli, who is a program development specialist at University Hospital (UH), helps patients make sense of their world in her role as a medical interpreter.

Take a scene that is so familiar to her: two frightened parents bring their little girl to UH because they don’t know what’s wrong with her. Due to developmental disabilities, the child cannot walk or speak. Her parents speak only Arabic. Thankfully, so does Chebli. When she walked into that room, these parents were relieved and thankful because she spoke their language.

Chebli, of Lebanese descent and fluent in Arabic, is just one of more than 100 UH employee volunteers who, together, speak 34 dialects including sign language. They help non-English-speaking patients and families navigate the UH system. “The medical interpreter training is an essential program to the hospital because we have an extremely diverse patient population,” explains Chebli. She supervises the program which is overseen by the UH Department of Care Coordination.

According to census figures, more than two million New Jerseyans (25.5 percent)

speak a language other than English in their homes. And in Newark, that number is even higher with 42.6 percent of the population relying on another language at home. That’s roughly 120,000 city residents. Chebli says the volunteers are often called upon to translate Spanish, Creole, French, Arabic, Portuguese and Tagalog. “The medical interpreter program allows the hospital to deliver the same high level of quality care to patients who speak all these different languages,” Chebli says.

One of her duties includes updating and distributing the roster, “The Volunteer Medical Interpreter Program,” which lists volunteers, the languages they can speak, and contact information. Distributed to all nursing units and clinics, this roster is also available upon request by phoning Chebli at (973)972-1707 or the Care Coordination office. Additionally, Chebli coordinates document translation, provides training for interpreters, and facilitates services for deaf and hard-of-hearing patients.

The roster is arranged by languages. For example, Savita Chauhan, who works in General Store, can translate Hindi and Gujarati, while Catherine Marcial in the Department of Medicine’s SAVE Program, speaks French, Portuguese, and Spanish. Marcial has interpreted for French-speaking natives of West Africa.

Chauhan, born and raised in India, has been at UH since 1997 and began volunteering in 2004 at the suggestion of co-workers. “Whenever I am called to help, I see patients who are very worried, confused, and nervous,” Chauhan says. “They see me and they feel comfortable. I try to explain their concerns for treatment. I make them feel hopeful.”

When a patient speaks no English, the staff has the option of calling for an in-person interpreter or using the Translation Plus Interpretation Phone Service, which connects patients by phone to an operator who can speak their language and translate for the healthcare team. In cases involving deaf or hard-of-hearing patients, the staff may use one of four Deaf Talk Machines, which provide Video Sign Language Interpreting Services via a mobile video conferencing unit on a rolling cart. For special medical cases involving non-English speaking, deaf or hard-of-hearing patients, using a live interpreter is encouraged.

*Continued on page 10*



Maryam Chebli Boukili

## A CLOSER LOOK THE LANGUAGE OF LOVE

Some interpreters on the roster have a medical interpreter certificate, which requires 18 to 60 hours of training. “We recently offered two days of training for all volunteers to refresh their skills and introduce new topics.” Included were: basic skills and the essential role of a medical interpreter, professionalism, and how to facilitate effective communication. They also reviewed the National Standards of Practice, focusing on accuracy, confidentiality, impartiality, respect, cultural awareness, role boundaries, and the National Code of Ethics for healthcare interpreters. Interpreters, for example, do not interject opinions or advice. They are there to provide the most accurate word-for-word translation possible using formal language, not slang, Chebli explains.

UH interpreters come to the rescue of patients in all care settings, from regularly scheduled OB-GYN appointments to emergency room encounters. Their tasks can be as simple as giving someone directions to

“It’s difficult to set aside personal feelings when you watch people cry. But you must be both sympathetic and professional.”

— MariaSol Arroyo

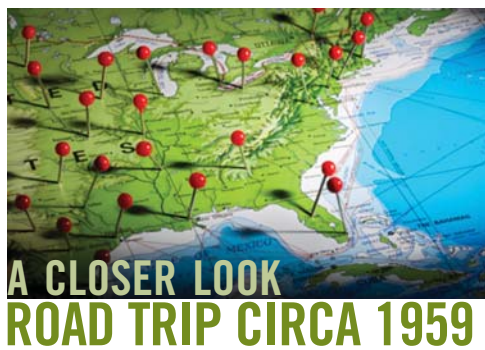
the cafeteria to as heart-wrenching as being the messenger of bad news. Volunteer MariaSol Arroyo will never forget the time she had to tell a daughter that her mother was terminally ill. “It’s difficult to set aside personal feelings and watch people cry,” Arroyo says. “But you must be both sympathetic and professional.”

Some volunteers get the call occasionally. Others are in constant demand. Arroyo, for instance, translates for Spanish-speaking patients an average of four times daily within her own Department of Nuclear Medicine but her language skills are also in

demand on other hospital floors about twice a week. A nuclear ECG technician, she grew up in a Spanish-speaking household and was accustomed to translating for her parents. “Sometimes I felt they were being treated differently or were uncomfortable because of the language barrier,” she remembers. Her parents were born and raised in Cuba but she was born in Madrid and came to the U.S. when she was a baby.

As a volunteer for six years, Arroyo can’t help but recall all the thankful patients who are so relieved she’s there to help them understand and be understood. With Arroyo there, “They feel at ease communicating how they are feeling. Sometimes I’ll get compliments like, ‘I wish the hospital had more people like you,’” she says. “So this is very rewarding.”

Chebli agrees. Patients “always show their appreciation so you get that sense of accomplishment from helping someone. That’s why we all do it.” ●



## A CLOSER LOOK ROAD TRIP CIRCA 1959

To check out residency programs 50 years ago, there was no internet option.

For med students now, taking a virtual road trip to look at medical centers or hospitals across the country is easy. Pull out a laptop or cell phone and click through the options to get initial impressions of where you might want to go in your future. You can even follow major healthcare institutions on Facebook or Twitter. But, back in the summer of 1959, Roger Cracco, MD’60, and Leo Pisculli, MD’60, had no such luck. “Roger and I drove across the country to check out all the great medical centers

before we made decisions regarding internships,” Pisculli, a neuro-psychiatrist, recalls. In Cracco’s 1956 Buick, “We started out in June, the same day I got my driver’s license and our first stop was the American Medical Association convention in Atlantic City.” The cost of gas, food, and motels was so low that they could eat breakfast, have dinner at a restaurant and sleep for about \$300 for the entire time. “Of course we stayed in places that charged \$2 to \$4 a night,” Pisculli says.

“It was a real Lewis and Clark expedition,” remembers Cracco, vice-dean of the College of Medicine at SUNY Downstate Medical Center and Distinguished Service Professor, Department of Neurology. The next stop on their westward journey was Philadelphia and its hospitals. Then, in Chicago, they visited Cook County Hospital and from there, went on to Los Angeles to see the University of Southern California (USC) and the UCLA Medical Center.

“In Los Angeles,” Pisculli says, “we spent six weeks as externs along with a classmate, Phyllis Bagdi, at Good Samaritan Hospital

and we were paid a total of \$60 plus free room and board.” While in California, Pisculli went off on his own up to Vancouver, British Columbia. “I was most impressed with Los Angeles County Hospital, a 3,000 bed facility at the time.”

On the return trip, the two checked out Denver as well as New Orleans where they toured Charity Hospital. They recall being in Little Rock where President Eisenhower had called in National Guard troops to enforce school integration. “Roger and I were both affected by how overt segregation was in the south. In Jackson, MS, we went into a bar which we discovered was for blacks only. They were shocked to see us but served us nevertheless. For me,” Pisculli says, “that trip was a great transition from student to doctor and it opened my eyes to the world beyond the shores of the Hudson River. I went west to that Los Angeles County Hospital and never came back.” Cracco stayed true to the east coast, choosing a hospital in Philadelphia and eventually Brooklyn, NY. ●



## NJMS PEOPLE DO YOU KNOW?

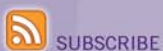
When we stumbled upon a blog by this name, we couldn't resist asking the author, who is in her first year at NJMS, "Why do it?"



**elena**  
Newark, NJ

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*posted by Elena Miriam Welt*

At least a million times a day I wonder how people got through medical school before the age of personal computers. When I sit on my bed re-listening to the biochemistry lectures on iTunes while simultaneously looking up the concepts I don't understand online and taking what must be 100 Facebook and Twitter breaks an hour, I imagine how different my studying would be without the internet. One thing, though, is for sure: I am much more productive when I turn off my wireless signal.

Besides the endless medical resources and distraction possibilities the internet provides, it is also an incredible tool for keeping in touch with family and friends. In the months between getting accepted at NJMS and actually starting school here last fall, there was plenty of time for nerves to build. My biggest fear was not that I wouldn't be able to keep up with the work, or that I would be living in a new city with a somewhat ambiguous (at best) reputation, but rather that once school started I wouldn't have time to maintain my relationships outside medical school.

I came up with the idea of a blog so that people wouldn't forget about me as I became busier and more involved with classes and electives here. But, it's quickly become both enjoyable and stress-relieving while keeping me grounded in the real world.

One example of how the blog connects me to the outside world is the way it forces me to see my vocabulary now. In just a few months, medical school has drastically changed that vocabulary, and I don't just mean the countless new names of enzymes or nerves that I have laboriously committed to memory. MGM, ACE, and the OSCE are not things that exist in the real world, but right now my life completely revolves around these three pneumonics. The first two are names of first-year courses, and the last is a type of exam. Defining all those abbreviations and terms is not only informative for people who read the blog, but the process reminds me that I am living in a bubble.

While it seems like the impossibly distant future, I am told that one day my life really will revolve around patients, not just pneumonics and abbreviations. Spending my days memorizing lists and structures, it is so easy to lose sight of the big picture. Though elective course offerings do get students outside this bubble by connecting us with the community, something as simple as updating my blog also helps. In the blog, as I describe the tests I take, my studying, or how I spend free time, I force myself to think about why I'm doing what I'm doing. And, as my class crosses milestones (Finishing biochem! Taking our first OSCE!), the blog helps me keep track of how far we've come on the path to becoming physicians.

*continue reading on page 15...*

## The Eloy Dynasty, Via Haiti

Say Haiti and there is an instant image of the earthquake-ravaged country in the Caribbean. This story, however, is about a family's success, a real-life Haitian version of the Brady Bunch. **BY MARY ANN LITTELL**

Take a family of five children thriving in Haiti, with its sapphire-blue sea and warm breezes, and transport them to New Jersey, where it's...New Jersey. The children speak little or no English and have never had to wear coats. Now sit back and wait for culture shock. It never happens. The children acclimate. They go to school (Bloomfield College, not the Ivy League) and grow up to become high-achievers—physicians, nurses, laboratory technologists and teachers—all the while remaining a close-knit, loving family.

It may sound like a TV sitcom—a Haitian variation of the Brady Bunch—but it's the true story of the Eloy family: Jean Daniel, Suzie, Jean Anderson, Gina and Nahomie. Four of the siblings are UMDNJ graduates. Daniel and Anderson are physicians, NJMS alums, and faculty members. (They are referred to by their middle names, since so many men in Haiti are named

Jean.) Suzie is a medical technologist with her master's in health science from UMDNJ's School of Health Related Professions (SHRP). Nahomie, the baby of the family, is a nurse currently studying for her master's in nursing at UMDNJ's School of Nursing (SN). Gina teaches fifth grade in Maryland. "I'm proud of my family, but I wanted something different," she says.

When the children were young, their parents, Bertin and Roselle Eloy, hatched a plan to relocate the family to the U.S. They sought a top-quality education for their children, something not readily available in their homeland. Also, sensing an undertone of political unrest in Haiti, the time seemed right to relocate. So the parents moved to East Orange in the early 1980s, leaving the children in Haiti with their grandmother, Anacilia Desulme, in their home village of Croix-des-Bouquets, eight miles northeast of the capital city, Port-au-Prince.

Their childhood in Haiti was for the most part idyllic. They went to school and played outside under the eagle eye of their grandmother. "She was very strict and watched us carefully," says Suzie. "We would not even think of disobeying her."

"Our brothers also watched over us," says Gina. "They were protective—maybe a bit overprotective. They never wanted us to date, just do our schoolwork." As much as Gina loves her grandmother, she remembers feeling sad that her parents were so far away. "I was the clingy one," she says. "When our parents came to Haiti to visit, I couldn't understand why they wouldn't stay. All my friends had their parents with them, why couldn't I? My siblings seemed to cope well with this situation, but it really affected me."

"I missed my parents, but didn't dwell on it," says Daniel. "Our focus was always on doing well in school. We never had to be told to study. Our parents said, 'You get the grades. We'll do the rest.'" The parents worked in a variety of job situations, from a chemical plant to a dry cleaner, to support their family, always with the goal of bringing them to New Jersey. It took much longer than they expected.

Reality intruded as the political situation in Haiti grew worse. "Our town was safe, but we sometimes heard gunshots off in the distance," says Nahomie. "We'd hide under our beds." Some classmates at the private school Daniel and Anderson attended were beaten and one was shot. The tight-knit family structure and their grandmother's love and vigilance kept them on track.

The parents were finally able to send for the three youngest children in May 1993. The older ones followed in August 1995. "My grandmother would tell us we were going to the U.S., but it didn't really sink in until we were on that plane," remembers Gina.

"I was glad to be with my parents, but the transition to a new country was diffi-



The Eloy family, left to right: Jean Anderson, Suzie, Nahomie, Gina and Jean Daniel.



Jean Anderson Eloy operating on a patient during his mission to Haiti.

cult,” she continues. “The language and environment were so different. There were times I cried myself to sleep.” The children spoke Creole and French, so learning English was their first priority.

The younger children attended school in East Orange, while the older ones went to Bloomfield College, enrolling in the ESL (English as a second language) program. “I considered Rutgers, but their ESL program would have taken too long,” says Daniel. “At Bloomfield, I could take ESL and science courses at the same time. By the end of my first year, I was pretty fluent.” Though Anderson was younger than Daniel, he had arrived in New Jersey first and was now ahead of Daniel in school. “It was helpful to have my brother guiding me,” says Daniel.

“Daniel was my role model and all my life I’ve followed everything he did,” explains Anderson. “When he said he was going to be a doctor, I decided to follow in his footsteps. Now I was able to help him.”

The family later relocated to Bloomfield, where the parents still live. All five of the Eloys graduated from Bloomfield College with honors. “It would have been unthinkable for us to separate or to go away to college,” says Suzie. “We were raised to stay close to home.” She continues to do so. The only one of the five who is not married, she works as a medical technologist at Refuah Jewish Health Center in Spring Valley, NY, and lives in Bloomfield with her parents, now retired.

Anderson graduated from NJMS in 2002, Daniel in 2004. Anderson completed a residency in otolaryngology/head and neck surgery at Mount Sinai School of Medicine of New York University in June 2007, and proceeded to complete a fellowship in rhinology, sinus, and endoscopic skull-based surgery at the University of Miami before joining the NJMS faculty in 2008. He is director of rhinology and sinus surgery at UH. Daniel, an assistant professor of anesthesiology at NJMS, is doing a fellowship in anesthesia at the University of Pittsburgh Medical Center. The program’s focus is on acute pain management, regional and orthopedic anesthesia—all specialties he will put to good use when he returns to NJMS in July 2011.

Nahomie works full-time as a psychiatric nurse at the Veterans Administration Hospital in East Orange and part-time as a medical technologist at St. Michael’s Medical Center in Newark. She attends school at night and says she will eventually get a PhD in nursing. Her husband, Anthony Gotay, MD, an NJMS alum, is a resident in psychiatry at Harvard South Shore Medical Center in Boston. “It has not been easy keeping up with our brothers,” admits Nahomie with a smile. “They thought we should all be doctors. But I think we’re pretty happy with the direction our lives have taken.”

“We actually thought we should all be surgeons,” jokes Daniel. “It didn’t turn out that way.”

The family maintains its close ties with each other and with Haiti. Fortunately, their grandmother and other family members living in Croix-des-Bouquets were safe following the devastating earthquake in Haiti, which hit close to Port-au-Prince earlier last year. “There was damage in our town, but fortunately, no homes were destroyed,” says Daniel. He traveled to Haiti on a medical mission in January, just a few weeks following the earthquake, working with surgeons from the NJMS Department of Surgery, including Ziad Sifri, MD, who shared his photos from the mission in the last issue of *Pulse*.

In March, Anderson traveled to Haiti on a mission with Project Medishare, a relief effort launched by the University of Miami. Through Medishare, teams of medical volunteers from throughout the U.S. went to Haiti immediately after the earthquake. Anderson went with Widny Pierre, a fellow Haitian and friend from Bloomfield College, who is an OR nurse. “We spent time at a makeshift hospital right next to the airport,” says Anderson. “It was just a huge open room with cots. I treated many people with facial fractures from the earthquake. We also helped people with medical issues unrelated to the earthquake. One patient I saw had a huge tumor in his mouth that I resected.” He says he hopes to return to Haiti soon. “There is so much need there. I would encourage all physicians to bring their skills to Haiti. It’s a very rewarding experience.”

The Eloys get together a few times a month at the parents’ Bloomfield home, with their grandmother, now 82, visiting once or twice a year. They say they never could have accomplished as much as they have without the support of their parents. “Our grandmother raised us, but our parents worked so hard for us,” says Susie. “All those years we spent apart were for us. And now we’re together.”

“I hope I can be as good a parent someday as my parents were to me,” adds Anderson. ●



“People get interested in the ‘sexy’ diseases. It’s very hard to advocate for TB but we have less TB now because we are doing our job.”

Lee Reichman, MD, in an interview for *The Star-Ledger* about the Directly Observed Therapy (DOT)



ANA NATALE-PEREIRA

## Champion for the Community

Inspired by her family who emigrated from Uruguay when she was 13, this doctor, who is also the mother of three-year-old triplets and a seven-year-old son, rarely stops moving from patients to projects.

BY MARY KATE SHERIDAN

Ana Natale-Pereira was just a little girl when she became enamored with medicine. At 8 years old, she loved roaming the vast wards and visiting patients at a public hospital in Uruguay where her aunt and uncle worked. “I was just fascinated by it,” says Natale. “I felt at home.”

Natale is now a doctor of internal medicine, but she’s “not your average doctor,” says Aida Martin-Rivera, program coordinator for the Centers for Medicare and Medicaid Services (CMS) Grant. “She gives every patient the care they deserve, and she’s

very culturally competent. That is very hard to find.”

Her journey toward becoming a community champion began when her family immigrated to Orange from Uruguay when she was 13 years old. Life as an immigrant was not easy, and the “cultural differences were huge.” It was this “culture shock” that sparked Natale’s strong desire to help the community. “I came as an immigrant. My parents never had health insurance,” she says.

After high school, Natale enrolled in Fairleigh Dickinson University and graduat-

ed with a BS in biology in 1988. (She was the first person in her family to graduate from college.) From there, she accepted a job at UMDNJ’s Center for Molecular Medicine and Immunology (CMMI) and also began a PhD program in biology at Rutgers.

But Natale had her eye on medical school, and there was only one on her radar: NJMS, “a school that embraced diversity.” While working at CMMI, Natale met James Foster, MD, NJMS assistant dean of admissions then and Maria Soto-Greene, MD, vice-dean, who introduced her to the Hispanic Center for Excellence, a model program to which Natale is still very committed. “That summer, I put my heart and soul into that program...I wanted to prove that I was very capable and willing to do this.”

Her dreams finally fell into place—Natale was accepted into NJMS, leaving her PhD program and her job to become a full-time medical student in August 1992. Three years later, as she searched for residency programs, she once again realized that NJMS was the only place for her. “I loved what I was doing here...I was very committed to the population here and to the people,” she says. After graduating in 1996, she worked as a resident in internal medicine at NJMS until 1999, when she became chief resident.

Since medical school, Natale has been an attending physician at UH and has reached the rank of associate professor at NJMS. In 2005, she received her MPH in Urban Health Administration from UMDNJ–School of Public Health. Natale’s roles have included teaching, research, and clinical practice. She also mentors students and residents and encourages them to share in her passion for community health.

Working with the neighboring community has been a driving force in Natale’s career and something that was initially fueled by one of her early mentors, Waldemar (“Buzz”) Johanson, MD. Johanson was committed to developing “a relationship between the medical system and the community. He envisioned the type of patient-centered care that we are promoting now,” says Natale.

Johanson’s vision materialized in the form



of the FOCUS Community Health Center. Located on Broad Street in Newark, FOCUS provides medical services to the Latino community. From 2001 through 2005, Natale served as the associate medical director and then as the medical director, where she developed strong relationships with the community and her patients. Her responsibilities also included teaching and mentoring students and internal medicine residents, who had the unique experience of working in a culturally and linguistically competent environment where the patient was the center of care.

After FOCUS, Natale became the medical director of Community Based Networks in the Division of Academic Medicine, Geriatrics, and Community Programs until 2007. And in 2006, with the support and mentorship of Debbie Salas-Lopez, MD, Natale became principal investigator on the Cancer Prevention and Treatment Demonstration Project for Ethnic Minorities, a four-year, \$2.8 million grant through the Centers for Medicare and Medicaid Services.

Based on what they had learned at FOCUS, Natale's team developed a proposal to facilitate cancer screening and care for elderly Latinos through patient navigation. Now in their fourth and final year of the CMS grant, the team operates a patient navigation program with more than 1200 participants across multiple counties. A "community-based approach" to patient navigation, they help the Latino community overcome barriers to cancer screening. "It is about their selfless personalities, their ability to problem-solve, their advocacy, and their passion for people," Natale says describing the patient navigators.

The CMS grant has been particularly important to Natale because it is community-based. She is "very positive with her efforts in helping the community," says Connie Muñoz, a CMS patient navigator.

"Understanding people helps get them to a better position in their health. I truly believe that. If you just look at the health issue or the illness you can't help them get better. You need to focus on everything

about them—their social determinants of health are just as important," she says.

But Natale's passion isn't solely rooted in community—she has been fiercely dedicated to cancer research and prevention since her father died of lung cancer in 2000. Since then, she completed a junior faculty sabbatical with the National Cancer Institute's Redes en Acción Program and served as a principal investigator and co-investigator on various cancer-related grants. She also participated in the Cancer, Culture, and Literacy fellowship through the Moffitt Cancer Center and a Leadership Fellowship with the National Hispanic Medical Association.

It is no surprise that the inspiration for her work has been her father—Natale's most important community is her family. Her eyes sparkle as she talks about her grandmother, who worked two jobs after immigrating to America and taught Natale the importance of having a work ethic. She smiles as she describes her busy household,

which includes her 3-year-old triplets (girls), her 7-year-old son, and her husband, Gustavo, her high school sweetheart. Her free time is dedicated to her extended family, who share some of Natale's passions: they participate together in the Making Strides Against Breast Cancer walk in the fall and the Relay for Life walk in the spring.

Despite all that Natale has accomplished, she maintains strong ambitions. Among her goals are to make patient navigation a standard of care in "the healthcare experience" and "to deliver comprehensive, patient-centered care for the community, reducing health inequalities, and in the process allow students to be part of that experience."

Our interview ends, and I reach out to shake this doctor's hand. I am met instead with a warm hug. As I walk away, she flashes a bright smile, and in that moment, I see the 8-year-old girl, completely in her element and filled with determination and dreams—still. ●

## A med student walks into a bar... *Continued from page 11*

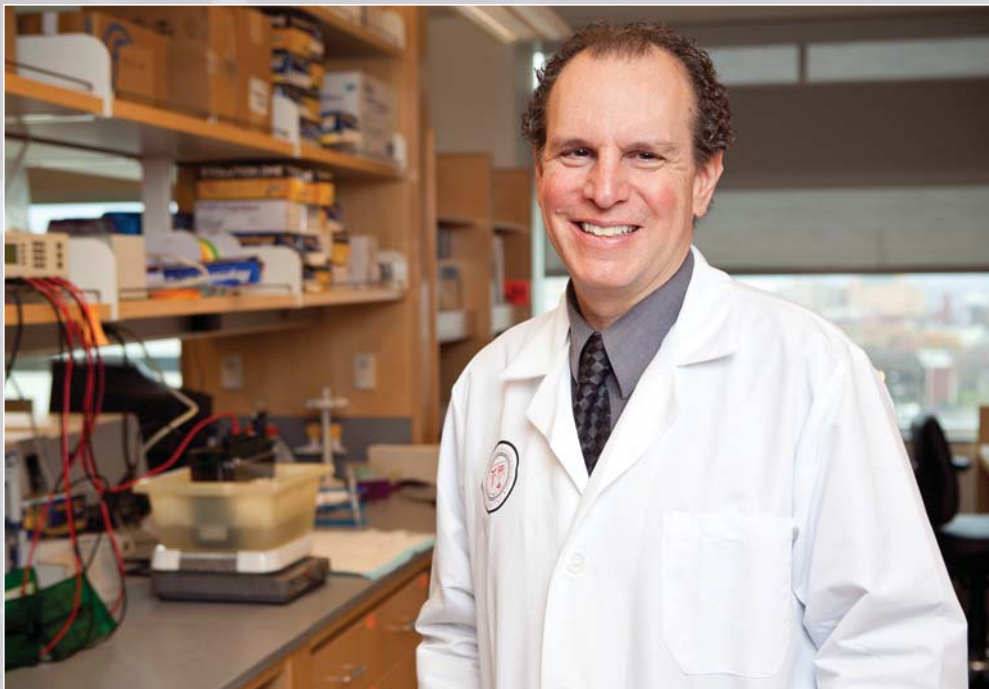
The blog also keeps me grounded in another way. When I start getting concerned emails from friends and family feeling sorry for me, I know that I am wallowing too much. Yes, med school is hard. But not only is it a choice I made; it's also an incredible privilege to be here.

Sometimes it's easier to write about the negatives. But there are many positives here too. Before each test, many of my classmates send out helpful study guides and PDFs of practice questions to the entire class. And there are those who plan awesome social events and nights out for everyone.

Although being a doctor is something I've wanted to do since high school, reading and writing have always been an enormous part of my life. Starting a blog was a selfish excuse to write whatever I wanted in a forum people might actually read (as opposed to journals I've kept which are secret, hidden files in my computer). I've always felt the need to document life, and medical school is no different.

Right now is an incredible time to be entering medicine. My class will be graduating in 2014, just as most of the provisions in the healthcare reform bill are enacted. No one knows for sure what the future will be like for doctors or for healthcare in general, but I am excited to be part of the changes and will keep track of them as they unfold. If nothing else, years from now I will be able to look back in the blog, and laugh at myself for how wrong I was about predicting my own future.

Check out <http://amedstudentwalksintoabar.blogspot.com>.



KENNETH MAIESE

## Brain Scientist, Builder, **Bold Leader**

The new chair in neurosciences defies categorization and is taking giant steps to build a top 10 department in a top 10 medical school.

BY EVE JACOBS

Brain science may be the final medical frontier, and, if so, Kenneth Maiese, MD, has chosen, and been chosen, to be among its notable frontiersmen. The new chair of the Department of Neurosciences at NJMS is that rare combination of basic laboratory scientist, hands-on clinician and bold leader, displaying a ying-yang of talents and skills that defies categorization. Pioneers of the Wild West, and leaders who in 2011 take giant steps through the sometimes narrow hallways of academia, share defining traits: high energy and focus, commitment and creativity, a cool head under hot pressure, the courage to take risks, and the intuitive know-how to build working-teams.

Maiese—a New Jersey native—fits the bill. He grew up in Pennsauken, graduated

as valedictorian from his high school and crossed the Delaware to earn an undergraduate degree in advanced math and physics summa cum laude with distinction from the University of Pennsylvania. “I enjoyed the science,” he says. “You have to be rational, focused.” But as graduation time neared he was faced with an unscientific dilemma—law school, medical school, business school, engineering, other. Multi-talented with widely divergent and equally compelling interests and options, he was perplexed.

Medicine won out. “It’s a privilege to be a physician,” he says simply. “People come to you with their utmost secrets and you can help them.” Medicine would be a profession he knew he could love.

This time he crossed the Hudson to earn

his medical degree from Cornell. There was a big emphasis on psychiatry at Cornell, Maiese says, and he enjoyed psychiatry. But sometimes you choose and other times you are chosen. He tells the story of Fred Plum, MD, a pioneer and influential researcher, and chair of neurology at Cornell for many years.

Plum chose Maiese for neurology during his medical school years. “Fred Plum had a reputation as a no-nonsense teacher. His program was very tough, but he most likely trained more leaders than anyone in neurology,” says the new NJMS chair.

But Maiese, who was ready to leave the East coast after finishing medical school, initially matched into one of only two highly competitive slots in medicine/neurology at the University of California, San Francisco (UCSF). But fate—and Plum—had their way. Sadly, Maiese’s father developed an eye condition leading to blindness, and the West coast was suddenly way too far from home. Just months before graduation, the fourth-year medical student went back to Plum to ask for that spot in his program, so he could remain within a train-ride’s proximity to his family.

Research was magnetic for Maiese, who jumped in head first during his third and fourth years of medical school, doing oncological research at Sloan-Kettering with physician-scientists, whose multiple talents and dual roles he admired and saw as his own future. During his residency years, he had a “particularly fertile” period of research, writing, and publishing, concentrating on stroke, coma, and ICU management and earning an independent training award from the NIH and then a K Award (Mentored Research Scientist Development). This was followed by a fellowship at the NIH Institute on Aging where he studied blood flow and metabolism in aging rats, “running” back to New York on weekends to do a simultaneous clinical fellowship on stroke. In 1992, he joined the Neurology Department at Cornell as an assistant professor. While there, his novel research on hippocampal neurons—the first brain cells

to die in stroke and Alzheimer's disease—and oxidative stress received early notoriety and he was awarded two patents as well as NIH and foundation awards.

In 1994, Maiese made a decision to move on to Wayne State University School of Medicine after turning down multiple other opportunities along the way. He was excited by the promise of an architect who would be hired to build the young neuroscientist's own uniquely designed lab and the go-ahead to develop a large research division that could partner with pharmaceutical companies. He held the positions of tenured professor in the Departments of Neurology, and Anatomy & Cell Biology, and Director of the Laboratory of Cellular and Molecular Cerebral Ischemia, the Maiese Laboratory Stroke Program, and the Maiese Laboratory Neuroscience Program.

While there, he made great strides, building a large laboratory and leading a team to form partnerships with outside companies, taking risks and earning trust. He also built an international reputation with a long list

**“We will be able to do personalized medicine,” he says, “enhancing the good for our patients.”**

of published scientific work and served on the editorial boards and as editor-in-chief for numerous journals. Quoting his official Wayne State profile, “his investigations are designed to translate basic science into successful therapeutic treatments for conditions such as cancer, metabolic disorders, cardiovascular disease, diabetes, stroke, and Alzheimer's disease. His work has received the distinction of ‘High Impact Research and Potential Public Health Benefit’ by the NIH with continuous funding from sources that include the American Diabetes Association, the American Heart Association, the Bugher Foundation, a Johnson and Johnson Focused Giving Award, and the NIH.”

Fourteen years later, he accepted the offer

made by NJMS to come back to the East coast and assume a new set of challenges. “I'm not interested in titles,” he asserts. “I'm interested in the opportunity to build. I have a vision. It's very exciting to be here.”

His “architectural” plans are optimistic and complex. His end-goal is to build a “Top 10 department in a top 10 medical school.” His master list of projects would scare-off even the most dedicated academic. Priority is not the issue: they are all important and all require significant input. He wants to be a great mentor who trains specialists and allows them to develop their talents and interests. He plans to shape a training program that will be a magnet for the best students.

He will build strong clinical programs in stroke, Alzheimer's disease, electrophysiology, and epilepsy that will also continue to be customer-friendly. He has taken on the co-chairmanship of the UMDNJ–University Hospital committee for customer service excellence and is determined to improve hospital care efficiency,

patient discharge times, and address other critical client-service issues. He is set on collaborating with the Department of Neurosurgery on an intensive care unit with a very high level of expertise, particularly in coma. He will bring together basic scientists and clinical scientists in neurology. He has already instituted quarterly breakfast meetings where staff, students, post-docs, scientists, and clinicians share what they are doing. He will encourage faculty to conduct more clinical trials; and will pave the way for basic science to grow. Oxidative stress, which he says is a basis for many disorders and illnesses, and cellular longevity are of particular interest to him. “We will be able to do personalized medicine,” he says, “enhancing the good for our patients.”

As if this is not challenging enough, Maiese is on the Advisory Board of Directors for The Cancer Institute of New Jersey, Robert Wood Johnson Medical School, and is heading up a University-wide committee to work on UMDNJ's application to join the NIH-funded Clinical and Translational Science Awards (CTSA) consortium, which currently includes 55 medical research institutions nationwide, “linked together to energize the discipline of clinical and translational science.

“It's a long shot,” Maiese admits, “maybe a one in a million chance, but worth trying for.” Not only will he need to build consensus among UMDNJ's geographically widespread schools and institutes, but he will have to inspire a sense of teamwork and shared goals before the roll-up-your-sleeves hard work begins.

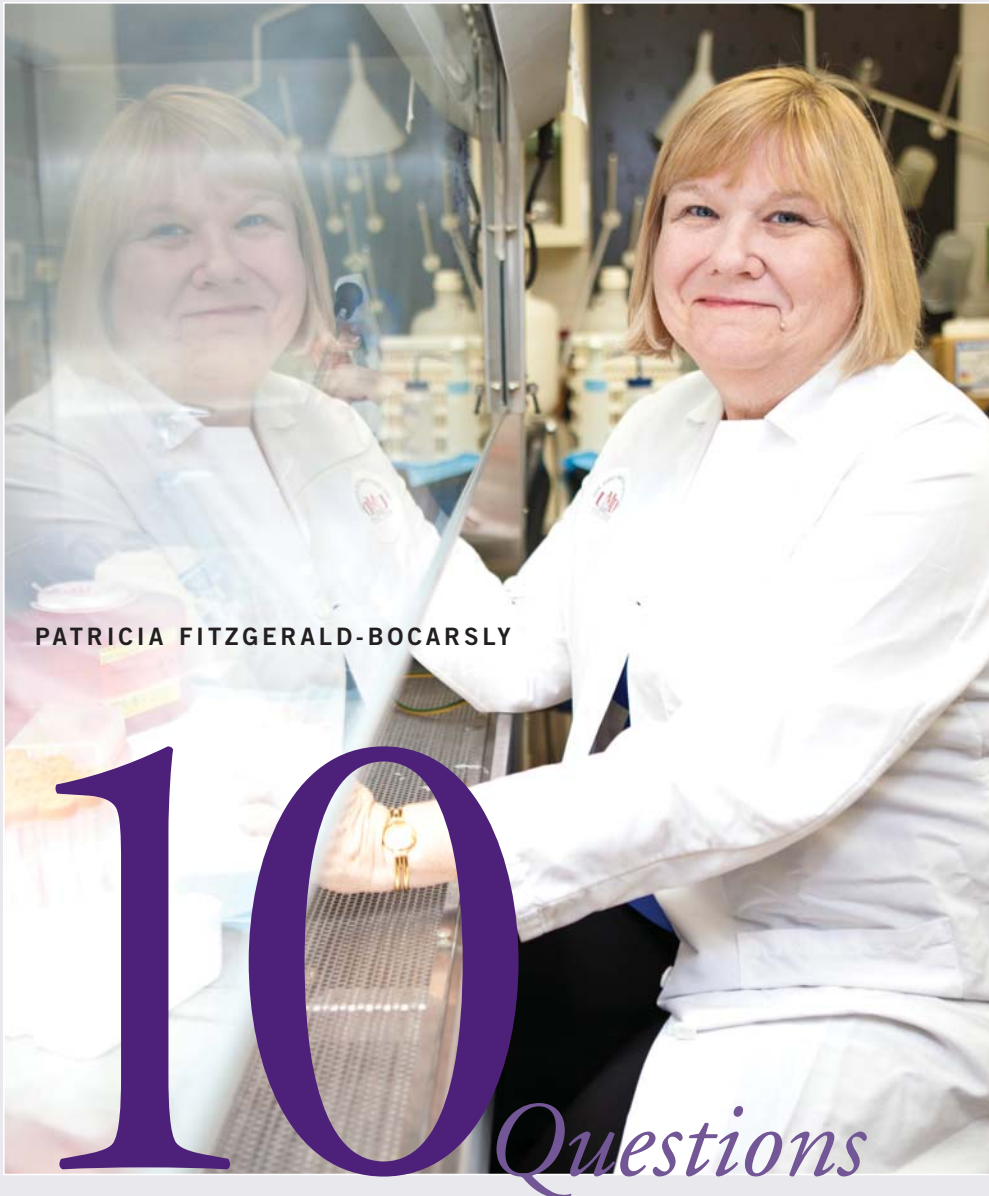
“To be part of this elite club would be wonderful,” he says. When fully implemented by 2011, the consortium will include 60 institutions. Membership would bring needed funding to UMDNJ. In 2006, the CTSA had a budget of \$20 to \$30 million, says Maiese, although their resources are far less now.

As Maiese moves virtual bricks and dismantles silos, reconstructs bases and assembles supports, you can see the outlines of his vision take shape. He wants the “best students, the best residents and the best faculty,” and he's building a home for them on two conjoined platforms—the basic science and the clinical.

“We can give them something unique—clinical and research exposures that are both strong,” he concludes. Despite the back-breaking labor ahead, it's hard to doubt the eventual success of this architect whose building will house a pivotal portion of the medical school's future. ●



# NJMS PEOPLE DO YOU KNOW?



PATRICIA FITZGERALD-BOCARSLY

Some mothers bake cookies to take to their children's schools. Patricia Fitzgerald-Bocarsly brought a human heart and kidney to her fifth-grader's class. "It made a great show and tell," she quips. "The kids were fascinated." This scientist has spent a lifetime devoted to research at NJMS, where she's a professor of pathology. She's also raised three children and was elected to the school board in her hometown of Plainsboro, NJ. Here, she tells how she made it all happen.

BY MARY ANN LITTELL

**Q: How did you become interested in science?**

A: My dad was an engineer and I've always loved math and science. As an undergraduate at UCLA, I took an immunology course during my junior year and was hooked. I'd been pre-med up until then. I did a senior research project with a professor and loved being in the lab, learning something new every day. I got my PhD in microbiology at Boston University, under the guidance of a great mentor, Michael Bennett, MD. At the time, he was describing early work on the interactions of the immune system with cancer cells and in bone marrow transplantation.

**Q: Why did you come to New Jersey?**

A: My husband and I met as undergraduates in organic chemistry lab. He got his doctorate at MIT and was offered a job at Princeton, where he's now a professor of chemistry. So we came here. After getting my PhD I worked at Sloan-Kettering in the lab of one of Dr. Bennett's collaborators, Dr. Carlos Lopez. I commuted to New York from the Princeton area for five years.

**Q: Please talk about this first job.**

A: At Sloan-Kettering we studied the immune response of human natural killer cells to herpes virus-infected cells. In the fall of 1980, one of our collaborators referred four male patients to our research group, all suffering from the same unusual immunodeficiency: severe herpes virus infections. It later turned out they were infected with HIV. We did some of the earliest characterizations of immunological responses in these individuals and many others like them who soon appeared and defined defects in natural killer cells and interferon-alpha production in these patients.

**Q: What brought you to NJMS?**

A: After being on the ground floor of HIV research from the very beginning, it was only fitting that my first contact at NJMS was James Oleske, MD, a leading AIDS expert. My advisor from Sloan-Kettering knew him and his pioneering work in pediatric AIDS. I came here in 1985, joining the pathology department at NJMS, where I've been for 25 years. I had a 15-month old baby, so I was glad I didn't have to commute to New York. At the time, and even more pronounced today, NJMS had more immunologists than any other school in New Jersey. The school was supportive and family-friendly.

**Q: How did you handle your responsibilities as scientist, mother and wife?**

A: I managed quite well with au pairs and the support of my husband. Because he worked much closer to home than I did, he was the point person for emergencies and often drove the children back and forth to their activities. I never could have done what I did without his help. I've encouraged my children to be sure and choose their life partners carefully. You want someone who'll share family responsibilities. My husband and I both place a very high priority on our family, and the five of us are very close.

**Q: What is a typical day like at NJMS?**

A: I'm a professor of pathology at NJMS and teach both graduate students and medical students. I still do basic research and am currently mentoring eight PhD students and one Master's student. We were among the first labs to identify plasmacytoid dendritic cells, which are important in the earliest interactions with viruses. I'm also director of the Flow Cytometry and Immunology Care Laboratory, which provides flow cytometric services to research laboratories at NJMS, surrounding universities and industry. We currently support the research of more than

80 investigators. I also work with other clinical collaborators here on HIV research. Effective drug regimens have increased the life expectancy of HIV patients. We're currently looking at premature aging in these patients. They are coping with chronic illnesses, including cardiovascular disease and dementia, at a much younger age than those who are not infected with HIV and are also showing signs of early senescence of the immune system, including plasmacytoid dendritic cells.

**Q: Any other interesting activities?**

A: I was just elected president of the NJMS faculty. I'm on the editorial board of some major journals and also serve on the American Association of Immunology Committee for the Status of Women. We are seeking to provide information and support to women, particularly young scientists. It's important for women to learn how to navigate through the world of science, be assertive and receive credit for the things we do.



**Q: What's the talk at the dinner table in your household?**

A: We are told by our kids' friends that our dinner conversations are different from others. We talk a lot about math, science and education, topics of great interest to all of us. Our daughters are both grown and making careers in science. One daughter is pursuing a PhD in neuroscience at Princeton; the other works for a neuropsychologist, conducting clinical tests for attention deficit hyperactivity disorder and concussions, among other things. She wants to get her doctorate and be a clinical psychologist. Our son, still in high school, has done his own research, started a political magazine and recently applied to the Siemens and Intel competitions for outstanding achievement. Oh, and he's also co-captain of the fencing team. They're a well-rounded bunch.

**Q: How did you become involved with your local school board?**

A: I served two terms on the board of education in my hometown, including one as vice president, and also served as a vice president and currently am a trustee of the West Windsor/Plainsboro Educational Foundation. Math, science and writing are so important. I felt that with my background, I could make a difference in our school district, and I think I have. I wanted to be totally involved with my children's school activities, and wouldn't let my work keep me away.

**Q: How have you served as a role model for your kids?**

A: Here's a funny example. When my second daughter was 5 years old, I came into her room, where she was sitting on her bed, writing something. When I talked to her, she held up her hand and said, "Shh! I'm working on my grant. Don't bother me." I guess I showed her how to focus and be single-minded about work. ●

# LIFE & DEATH MATTERS *of the* HEART

In the midst of a serious heart attack, Anthony Bridges ended up in a very special medical trial and breakthrough technology saved his life.

BY KAYLYN KENDALL DINES  
PHOTOGRAPHS *by* ANDREW HANENBERG

Anthony Bridges vividly remembers the experience that changed his life on October 8, 2009. After his regular 90-minute drive from Pennsylvania to Newark, NJ, he arrived at his desk at 6:15 am and had a cup of coffee. Physically, he felt fine.

Every workday morning, this maintenance manager at Anheuser Busch across from Newark Liberty International Airport meets with his staff to divvy up assignments before delving into paperwork.

“Around 11 am, I started feeling woozy. I thought I was hungry,” recalls Bridges, age 63. He almost made it to the cafeteria. Suddenly, heading back to the maintenance shop seemed more logical to him. Something was terribly wrong. “The pain in my chest started. It felt like my chest was caving in and my heart was trying to jump out.” Bridges had no idea he was having a heart attack.





When the Emergency Medical Technicians (EMTs) from UMDNJ–University Hospital responded, they carried an innovative technology, STAT MI (Segment Analysis Using Wireless Technology in Acute Myocardial Infarction).

Heart attacks demand swift action. Every second is critical. According to the National Heart Lung and Blood Institute, approximately 1.1 million heart attacks occur in the U.S. each year. About 460,000 are fatal.

Cardiologist Marc Klapholz, MD, explains, “Having a heart attack could feel like you have an elephant standing on your chest.” When a heart attack occurs, muscle is lost. As time passes, more muscle is lost. Klapholz, an NJMS professor of medicine and director of cardiology at UH, says, “Time is muscle. There is a window of time in which the blood supply can be reestablished and the heart muscle protected from damage. That window closes rapidly after about one hour. After four hours, the heart muscle is often irreversibly damaged and dies.”

The American College of Cardiology and the American Heart Association recommend that blood flow be reestablished within 90 minutes of arrival at the hospital.

“This remains the Holy Grail,” Klapholz says. “The mortality of patients who have their arteries opened within 90 minutes of presentation is about 3 percent. When the procedure occurs three hours after symptoms begin, mortality rises to 12 percent.”

Patient Anthony Bridges describes his UH cardiac team as “a well-oiled machine.” Left to right: Arthur Rusovici, MD, Alma Salazar, RN, Marc Klapholz, MD, Preet Randhawa, MD, Jim Maher, MD and Jim Riley, RN



STAT MI uses wireless technology and software. The time from administering the initial ECG in the field to availability for view by the physician on the smart phone is approximately 90 seconds. A clinically-focused conversation between the EMT and the doctor verifies that the patient is having a heart attack. On arrival at the hospital, these patients bypass the ER and go straight to the cardiac catheterization laboratory for angioplasty.

Traditionally, heart attack victims must be evaluated in the ER; ECGs are obtained; assessments are done; cardiologists are notified; the cath lab is opened; patients are transported there; and only then do procedures begin. With STAT MI, in Bridges’ case, almost all this took place en route to UH. His ECGs were transmitted from the ambulance directly to the cardiologist at the hospital.

Bridges, who has been married for 43 years, never had heart problems before that morning. “When I talked to the physician later, he told me I was in the right place at the right time. If I had been driving my car or anywhere else, I wouldn’t have made it.” It was STAT MI that helped save his life, he believes. During Bridges’ angioplasty, the cardiologist located and removed blockages before inserting a stent.

Bridges is alive because three years earlier UH leaders had asked two important questions. How do you reduce the time it takes to treat a heart attack patient? And, wouldn’t it be more efficient to communicate directly with EMTs to assess patients in the field?

To address those issues, the cardiology team worked with the Emergency Department, UH Admissions, the NJ Department of Health and Human Services, the Verizon Foundation and Medtronic.

With funding provided by Verizon and Medtronic through the Foundation of UMDNJ, they created STAT MI.

Another more recent grant of \$20,000 brings Verizon’s financial support of the program to \$100,000. “As a leading broadband company, Verizon knows that technology can make a tremendous difference in the communities where we work and live,” says Douglas W. Schoenberger, vice president of corporate responsibility for Verizon New Jersey. “This multi-year partnership with the Foundation of UMDNJ has been a worthwhile investment for the Verizon Foundation because it clearly demonstrates how a technology-based application can create tremendous, life-saving benefits for patients experiencing potential





Marc Klapholz, MD

## MAKING HEADLINES, SAVING LIVES



The NJMS/UH cardiology team's inspired application of cell phone technology to reduce delays in getting patients into the cardiac catheterization laboratory has had an enormous impact since its launch (noted just over two years ago in *Time* magazine's review of the year's top medical triumphs).

Bluetooth technology and dedicated email servers helped cut "door-to-intervention time" drastically. "This is a paradigm shift," Klapholz says. And he's not exaggerating. The Society of Cardiovascular Angioplasty and Interventions described the work as a "breakthrough." Their paper was published in July 2007 by *The Journal of the American College of Cardiology*, the premier clinical cardiology journal in the world. At the time, the Associated Press also covered the story, with Yahoo picking it up and transmitting it worldwide.

Now, this same group has taken another giant step in heart care, demonstrating the value of the STAT MI program way beyond their own wildest imaginations. They've proven that heart attack size is smaller, length of hospital stay is shorter and mortality is reduced for patients treated through this early identification wireless network system. "The size of the heart attack is the biggest predictor of long-term outcome," says Marc Klapholz, who heads up the project.

In addition, gender bias, which puts women at a serious disadvantage in heart attack treatment, is virtually eliminated. Klapholz explains: "The STAT MI program certainly benefits men—their time into treatment is cut by 63 minutes.

"But women benefit even more—their time is cut by 131 minutes, which translates into greatly reduced heart attack size and vastly improved pump function."

And it doesn't stop there. Edo Kaluski, MD, director of interventional cardiology, explains that there is a "halo effect," which means that even heart attack patients who walked into the emergency room, so were not part of the STAT MI group, benefited since medical response time for all patients was reduced.

"STAT MI had a good effect for everybody. And refinements leading to improvements have continued over time—meaning further reductions in response time and greater improvements for all STAT MI and other heart attack patients," he says.

heart attacks." Currently, 12 UH ambulances are outfitted with STAT MI technology.

In 2007, STAT MI won the top prize for innovative approaches and management of patients with heart attacks from the Society for Cardiovascular Angiography and Interventions (SCAI). That year, STAT MI was also one of 26 medical innovations recognized by *Time* magazine in the article, "The Year in Medicine from A to Z."

Since his heart attack, Bridges, a father of two sons and grandfather of six, has changed his eating habits and dropped 18 pounds. When he does try to snack on junk food, his family has no problem cautioning him, especially his wife. "I look at a bag of chips and she stops me. I look at a Twinkie and she gives me 'her look.'" Even his grandchildren chime in, "You can't eat that Grandpa. That's garbage."

Today, he has a new lease on life and remains thankful for the care he received at UH. "Based on the treatment I got and the people I came in contact with, I don't think there is a better place to go. I couldn't have asked for a better staff. I couldn't have asked for better care. As soon as I hit the door, they knew what to do. They were like a well-oiled machine," he recalls. And he should know. Bridges was conscious from the time of the attack and throughout the surgery. "This technology saves precious minutes and was a lifesaver for me. That's for sure. I just wish all hospitals would have STAT MI." ●



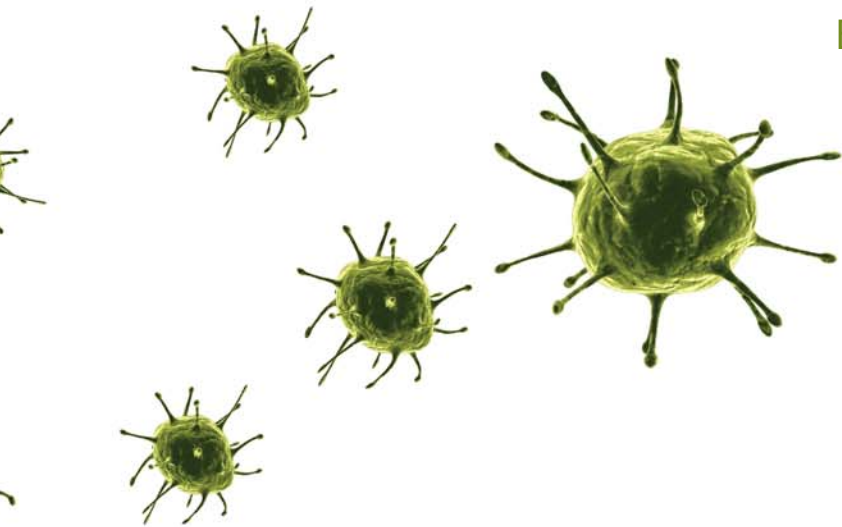
# Why Do

“**C**uriouser and curiouser”... Like the world of Wonderland, the role of immunity and inflammation in human health and disease is an area of research that has expanded so dramatically that even Alice might have used her famous expression, “curiouser and curiouser,” to describe the important and inter-related research areas.

What keeps an infection latent in one person and not in another?...Where is that fine balance between immune protection and the kind of inflammatory response that becomes a killer?...What really is protective immunity in humans?...Can air pollution tip the scale towards illness?...Should you be blaming your genes when you get sick?... Forget blood, why not look at what's in lymph?...Do you realize that women truly are the stronger sex (at least when it comes to traumatic injury)?...How does an impaired circadian rhythm (regulated by a gene eloquently known as *CLOCK*) affect your metabolism during systemic inflammation?...

Last September, a UMDNJ symposium on “Inflammation, Immunity and Infectious Disease,” on the Newark campus, shed light on findings that had more than 75 scientists in the audience listening closely. The two-day conference sponsored by The Office of the UMDNJ Senior Vice President for Research and co-directed by the medical school in conjunction with New Jersey Dental School (NJDS), brought researchers, clinicians, faculty and students together to share discoveries, stimulate new ideas, and encourage future collaborations. To judge from the conversations in the corridor outside the conference room in the NJDS Oral Health Pavilion, the symposium was clearly a success. Thirteen UMDNJ speakers presented novel the-

# People Get Sick?



## Exploring links between inflammation, infection & immunity

BY MARYANN BRINLEY

ories, including four from NJMS. In brief, here's what you missed. Feel free to contact each directly for more information.

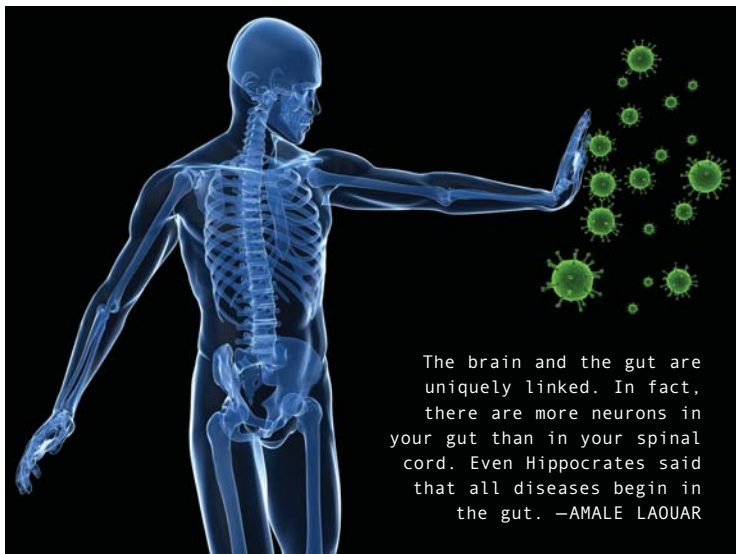
**XINHUA CHEN, MD, MSCE**, assistant professor, OB/GYN, UMDNJ–School of Osteopathic Medicine: *Inflammatory activity, gestational hyperglycemia and adverse pregnancy outcomes*. In a large epidemiological study, she focused on young minority women in Camden who go untreated for even mild hyperglycemia.

**EDWIN A. DEITCH, MD**, professor and chair, surgery, NJMS: *Gut lymph and lymphatics; a source of factors leading to organ injury and dysfunction*. Trauma is the leading cause of death in people under age 40 and modern medicine has yet to understand the mechanisms which lead to this high mortality rate. Deitch and his team point to a “gut lymph hypothesis” as critical in causing adult respiratory distress syndrome and multiple organ dysfunction syndrome. “That the gut drives organ failure simply makes sense.” In his research, he's also found that women actually are the stronger sex because estrogen makes females more resistant. “Sex hormones modulate this response in gut injury.”

**SCOTT R. DIEHL, PHD**, director, Center for Pharmacogenomics & Complex Disease Research, professor, oral biology, NJDS: *The genetics of inflammation in susceptibility to pain, periodontitis, and pollution*. A large number of apparently unrelated diseases and disorders actually share common underlying pathways controlling inflammation. Why does this happen? Diehl explains, “The inflammatory response

usually serves as a protective mechanism but individuals sometimes differ in how they respond to triggers.” Each person's inherited genetic variation influences their inflammatory response to these triggers—some respond too strongly or for too long a period of time and this hyper-inflammation becomes damaging to some of their tissues. Scientists think this occurs in periodontal disease and in pain susceptibility. We know that variation inherited in DNA is largely responsible for these differences in inflammatory response. However, it has proven difficult to specifically identify many of the DNA variants (called “polymorphisms”) that are actually responsible. Diehl is optimistic that this goal will be achieved in this decade as whole genome DNA sequencing of thousands of individuals becomes economically feasible. He emphasizes the important benefits: “An improved understanding of the genetics of inflammation may lead to better capability to identify individuals at high risk and to target treatments based on individuals' inherited genetic profiles.”

**ELI ELIAV, DMD, PHD**, professor and interim chair, diagnostic sciences, director, Division of Orofacial Pain, NJDS: *The role of inflammation in neuropathic pain*. Inflammation anywhere along the trunk of a sensory nerve can produce pain and aberrant sensations in that nerve but also in the organ supplied by the nerve. This may be the underlying mechanism for some of the unexplained pain syndromes. This type of “perineural and neural inflammation may accompany trauma, infection, malignancy or autoimmune conditions,” according to Eliav. If allowed to persist, such inflammation can cause permanent nerve damage.



The brain and the gut are uniquely linked. In fact, there are more neurons in your gut than in your spinal cord. Even Hippocrates said that all diseases begin in the gut. —AMALE LAOUAR

**DANIEL H. FINE, DMD**, director, Dental Research Center, professor and chair, oral biology, NJDS: *Lactoferrin, a host modulator of dental infections?* Fine explains, “The motto of our department has been, ‘Listen to your bacteria,’ and thus far, this approach has produced several patents that we hope can be translated into useful therapies for many conditions and diseases that extend far beyond the oral cavity.”

**WILLIAM C. GAUSE, PHD**, senior associate dean for research, director, Center for Immunity and Inflammation, University Professor, NJMS: *Regulating inflammation: Lessons from helminth infection.* Helminths are parasitic worms that can live in humans for long periods sometimes causing chronic disease. Yet, they aren’t all bad. These parasites are also master regulators of the immune response and they can trigger specific immune cell populations that can control a variety of inflammatory diseases. In fact, the hygiene hypothesis states that increased incidence of inflammatory disease in developed countries may be partly a consequence of the eradication of parasitic helminths. As Gause states in his abstract, “Ongoing clinical trials are testing whether parasite products or live parasites may effectively impair autoimmune diseases including Crohn’s disease and multiple sclerosis.”

**BEATRICE HAIMOVICH, PHD**, associate professor, surgery, RWJMS: *Melting clocks and deregulated metabolic pathways during systemic infection.* Haimovich studies innate immune responses to endotoxin exposure in addition to the human body’s circadian clock. “Our recent work demonstrates that the circadian clock module which normally synchronizes metabolic activities among tissues, is profoundly suppressed in peripheral blood leukocytes during the acute phase of systemic infection.”

**AMALE LAOUAR, PHD**, assistant professor, surgery, RWJMS: *Gut specific antigen presenting cells: Their role in mucosal innate immunity and infection.* According to Laouar, “The gut is an essential immune organ

that contains 40–60 percent of the body’s total lymphocyte population.” In her presentation, she pointed out that the brain and the gut are uniquely linked and, in fact, there are more neurons in your gut than your spinal cord. Even Hippocrates once said that all diseases begin in the gut.

**PADMINI SALGAME, PHD**, director, graduate medical research program, professor, medicine, Division of Infectious Disease, Center for Emerging and Re-emerging Pathogens: *TLR2—principal regulator of the tubercle granuloma.* (For more about Salgame, see page 28)

**STEPHAN SCHWANDER, MD, PHD**, associate professor, UMDNJ–School of Public Health (SPH) in Piscataway, Department of Environmental and Occupational Health: *Human antimycobacterial lung immunity—disruptive effects by particulate air pollutants?* Schwander talked about collaborative research work with researchers in Mexico City on the human lung immune defense system during lung tuberculosis and *Mycobacterium tuberculosis* infection. Looking for protective immune responses in the human respiratory tract has been “challenging and complex to study,” he reports. Recent work in his lab provides evidence that air pollution particles (diesel exhaust) adversely affect human immune defense responses against *Mycobacterium tuberculosis*. “These findings may have important global public health implications, considering that urban air pollution is increasing in many low and middle income countries that often also have high rates of tuberculosis,” he says.

**YUFANG SHI, PHD**, professor, molecular genetics, microbiology and immunology, RWJMS: *Immune regulation by tissue stem cells.* Mesenchymal stem cells (MSCs) are adult stem cells that exist in various tissues and are believed to supply new cells for the repair and remodeling of damaged or aging tissues. MSCs can “turn off immune responses in situations including autoimmune disease and organ transplantation,” according to Shi. His studies could provide important insight into therapies tailored to “cancer, heart disease, multiple sclerosis, type 1 diabetes, rheumatoid arthritis, systemic lupus, severe combined immunodeficiency syndrome, Parkinson’s disease, and spinal cord injury.”

**GEORGE S. YAP, PHD**, associate professor, medicine, Center for Immunity and Inflammation, NJMS: *Autoregulation of the T helper-1 response.* There is a fine balance between protective immunity and immunopathology, according to Yap. “The inflammatory response can be a killer.” His lab has been focused on how a body responds to infection by *Toxoplasma gondii*. This clever one-celled parasite, which can hide and is often carried by cats, infects more than half the world’s population. Yap was the first researcher to find out how the immune system can kill this parasite by using autophagy to break down its protective membrane, eat it up and recycle the cells. “There is a saying that ‘nature is thrifty,’ and we see it at work here.” ●

**S**TEVEN E. SCHUTZER HAS BEEN DOGGED in his investigative pursuit of a tiny spirochete named *Borrelia burgdorferi* for decades—ever since it was identified as the “critter” residing in the guts of ticks, which sometimes burrow into human skin after hitching a ride on deer and white-footed mice that live in our woods and suburbs. A physician-scientist whose interest lies in the interface between infectious agents and the immune system, this professor has persistently chased after the mysteries of the tiny, coiled bacteria—sometimes deposited by the tick as it gorges on human (and animal) blood. Recently, his research has provided detailed information that is much-needed for better Lyme disease diagnosis.

A bull’s-eye rash often serves as a warning bell to the tick-bitten even if they have not spotted the barely-visible, freckle-sized tick or experienced the early symptoms of Lyme. A short course of antibiotic therapy often wipes out the acute infection in a short time—case closed. But for those who neither spot the tick nor develop the definitive circular markings or early symptoms, diagnosis can be delayed and problematic. And sometimes severe brain and nervous system symptoms come on weeks or months after the tick bite and persist for years, even after treatment, a development that has baffled patients and scientists.

Symptoms of Lyme can range from the well-known target-shaped red rash, which may appear early on, to less frequent symptoms including debilitating fatigue, headache, muscle and joint pain, stiff neck, peripheral neuropathy, and difficulty concentrating or memory impairment because the disease can affect the skin, heart, joints and nervous system, varying from patient to patient in intensity, duration and scope. For those whose symptoms persist, a longer course of intravenous antibiotic therapy may work. But in some people, symptoms continue.

The U.S. Centers for Disease Control and Prevention report that the incidence of more serious Lyme illness has grown in the last two decades; and the spirochetes are appearing far beyond the borders of Lyme, CT, where the disease was first identified. Schutzer, whose Lyme research has been funded over the years by the NIH, and whose work has been published in the *New England Journal of Medicine*, *Science*, *Lancet*, *the Journal of the American Medical Association (JAMA)*, *the Journal of Clinical Investigation*, and *HealthState*, UMDNJ’s magazine from 1982 to 2003, came to NJMS with an MD from Cornell, training at The Rockefeller University, and board certification in internal medicine, allergy and immunology, and diagnostic laboratory immunology. Much of his research has focused on *Borrelia burgdorferi*.

His most recent findings, made in collaboration with Claire M.

Fraser-Liggett, PhD, of the Institute for Genome Sciences at the University of Maryland School of Medicine and several other scientists, made a splash both in the academic press and consumer media. Published online—ahead of print publication—in the October 2010 issue of the *Journal of Bacteriology*, the research marks a giant step forward in the battle against Lyme. The team determined the complete genetic structure of 13 strains of the spirochete—including those that are common in Lyme disease seen in North America.

“A driving force for doing this project was the observation that certain forms of the bacteria can be more invasive than others. We wanted to find out why, and how to identify this properly,” explains Schutzer.

Current screening methods miss some early Lyme cases and can not determine which cases will become chronic and which will resolve immediately. “For years, scientists have known about the existence of multiple Lyme bacterial strains but have been unable to delineate which symptoms each caused,” explains Schutzer. With this precise genetic information and that of other bacteria, tests that are more targeted to specific Lyme disease strains can be developed.

Their work may help the development of a vaccine. Although the spirochete was identified 27 years ago as the Lyme culprit, there is still no effective vaccine for humans on the market.

Just four months earlier, Schutzer and collaborators at Pacific Northwest National Laboratory hit the headlines with research identifying 2,630 proteins residing in “normal” cerebrospinal fluid (CSF)—the “most comprehensive characterization of true normal CSF to date,” according to the team.

The NJMS professor describes spinal fluid as “akin to a liquid window to the brain.” The number of proteins the team identified is almost three times the number previously known; and 56 percent of the proteins are unique to spinal fluid—and not found in blood.

According to the article, which was published in June by *PLoS ONE*, an international, peer-reviewed, open-access, online publication, “Knowledge of the entire protein content, the proteome, of normal human cerebrospinal fluid...establishes a comparative standard and basis for investigations into a variety of diseases with neurological and psychiatric features.”

In other words, Schutzer’s dogged scientific pursuit of answers to the puzzle of why infection with the Lyme spirochete means benign, short-term disease for some, and long-term neurological problems for others, has finally yielded a wealth of information that promises significant insights into not one disease, but many brain and nervous system disorders that plague humankind. ●

## In Pursuit of the Wily Lyme Spirochete

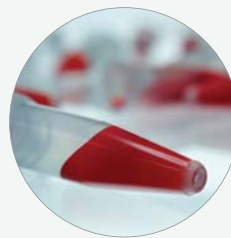


**He’s been hunting for the secrets behind this critter, a tiny, coiled bacteria found in the guts of ticks and responsible for Lyme disease, for decades. And he just took a giant step closer.**

**By Eve Jacobs**



Andrew Kim, left, with Salgame and Jill Konowich



In the lab with  
**Padmini Salgame**

This gifted TB researcher learned to burn the midnight oil long ago and got hooked on studying “bugs” back in India. Not the creepy, crawly kind, but the pathogens that cause leprosy and TB.

BY JILL SPOTZ

**A**s a young microbiology student at the University of Bombay, Padmini Salgame got hooked on “bugs.” Not the creepy, crawly kind, but the pathogens that cause leprosy, often referred to as “the living death.” Its victims develop debilitating, disfiguring disease and are socially stigmatized.

The inspiration behind her desire to research leprosy was a plastic surgeon-turned-researcher who was her graduate school mentor, Dr. Noshir Hormasji Antia. Well-known for his pioneering efforts with leprosy patients, Antia invented surgical procedures to correct deformities caused by this disease which can affect skin and nerves. “Dr. Antia inspired me to do something good for society,” she explains. Undeterred even when his colleagues warned that leprosy work would drive other patients away, he gave up a flourishing plastic surgery practice to make a difference and focus on a cure for the disease. After going back to England where he had studied plastic surgery earlier in his medical training, he returned to India to set up a lab in Bombay, which is where Salgame was lucky enough to land.

Studying under the direction of a busy man fostered a sense of independence in the young grad student. Now, she passes on that same self-determining work ethic to her students. “He pushed us to

attend meetings, to talk with other researchers, to improve communication skills and to interact with others. That is what science is about,” she says. “We need to be able to discuss ideas.” After earning her master’s, Salgame completed a PhD in Bombay and then traveled to London for a prestigious Wellcome Trust fellowship in immunology at University College. There, she was mentored by Professor Avriion Mitchison. And it was there that she honed her immunological skills. “It was a fantastic two years,” she recalls. “I was able to experience all the excitement of living in London, as well as focus on science.”

These days, Padmini Salgame, an NJMS professor of medicine and director of the Graduate Medical Research Program, is still studying “bugs.” Now, however, it’s *M. tuberculosis* (TB), which effects one-third of the world’s population. Like leprosy, TB is caused by bacteria and without treatment, this disease has a 50 percent death rate. Salgame focuses on the immune response to tuberculosis and has more than \$1 million in funding from the National Institute of Allergy and Infectious Diseases (NIAID) and the American Recovery and Reinvestment Act, including a shared instrument grant for a flow cytometer to isolate TB-infected cells in their facility.

On any given day, Salgame’s lab in the Center for Emerging

Pathogens bustles with seven staff members including an instructor, two MD/PhD students, a PhD student, a postdoctoral fellow and research assistants. Their common goal: to unravel the body's immune response to TB and pave the way for an effective TB vaccine and new treatments.

Their leader's calm, approachable demeanor can be sensed in the laid-back but busy atmosphere. On this day, Salgame is reviewing papers for scientific journals, problem-solving with staff, and discussing experimental study designs and results. She encourages independence and believes that collaboration benefits everyone. "If you succeed, then I succeed," she says. MD/PhD student Amanda McBride agrees that this approach sets her mentor apart as simply great. "She pushes us to develop our own experiments and to write our own fellowships and grants," McBride explains. "She is always there for us but urges us to think."

With her cup of coffee, Salgame routinely stays late each night. In the middle of a grant application, she has been known to "burn the midnight oil," go without sleeping, and still work the full next day. Grant writing is a large part of her job; a talent that she has perfected considering her continuous line of funding from the National Institutes of Health (NIH). She is principal investigator for two studies (Helminth modulation of Mtb infection and TLR2 and the tubercle granuloma) and co-investigator for a large International Collaborations in Infectious Disease Research (ICIDR) grant. This ICIDR research involves several labs investigating immunity and biomarkers in family members of patients with active TB who live in Brazil. "This project allows us to take the knowledge that we learned from mouse models and apply it to humans," she explains. "Hopefully, we will be able to validate our findings back in the mouse model."

In this five-year study, Salgame and her co-investigators (Jerrold Ellner, MD, David Alland, MD, Edward Jones, MD, Reynaldo Dietze, MD, Rodrigo Rodrigues, PhD, and Moises Palaci, PhD) are monitoring the blood samples of household contacts of active TB patients. Among these families living with a member who has TB, some people do not acquire the disease at all; others do not contract TB even after being infected; and a third group is reputed to be able to cure their own latent infections, which Salgame explains "is all conjecture." This study will pinpoint biomarkers so future physicians will be able to identify outcomes and therapies for individuals.



## To Give Students a Competitive Edge

"An extra year of research experience provides students with a competitive edge and teaches a different way of thinking," Padmini Salgame believes. And as the director of a new NJMS program for third-year students which offers exactly that, she is pleased. "Critical analysis is important. If an experiment goes wrong they can return to the 'bench' to find a solution." The program grew from brainstorming sessions with fellow faculty member William C. Gause, PhD, Senior Associate Dean of Research and a professor in the Department of Medicine. This Medical Research Program will let students conduct basic research in the middle of their medical school education and then graduate with distinction. The school is recruiting three to four students who have completed their first two years. They'll be able to choose from a list of mentors and the good news is that Salgame is one of them.

This is not the first time that Salgame has been engaged in an international endeavor. While completing her second post-doctoral fellowship at Albert Einstein College of Medicine under the mentorship of Professor Barry Bloom, she was involved in ground-breaking research in human disease. "We would receive a weekly supply of blood samples of patients with leprosy from Caracas, Venezuela," recalls Salgame. "A driver picked up the samples at the airport and dropped them off at the lab by 6 pm. I would then process the samples until 2 am. We would never have been able to have access to these samples without this wonderful collaboration with Venezuela." In those six years at Albert Einstein, not only did Salgame's interest in host responses "grow" but she also perfected her ability to work around-the-clock.

In the lab, Salgame is researching what she refers to as "a tale of two cells," or how dendritic cells and macrophages respond to TB infection. The research addresses how these two cell types behave *in vivo*. The new flow cytometer isolates the cells, which can be kept viable for other experiments. Though it's near the end of the work day, Salgame and her staff still have hours to go. In fact, this researcher is gearing up to write yet another grant. Along with colleague Kamlesh Bhatt, PhD, instructor, they are seeking funds to investigate a component of the immune response. Amanda McBride is still there too, editing her thesis and in need of her mentor's advice. Of course, Salgame's door is open. There is no doubt that on some future day, these students will recall their mentor with as much enthusiasm as Padmini Salgame remembers hers. ●

**10** postcards sent from vacation destinations ordinarily report: “Having a wonderful time”...Or, “Wish you were here.” For eight NJMS students, off-campus experiences were not ordinary at all. All received stipends for six weeks of community service from Richard Pozen, MD’74 and his wife, Ann Silver Pozen, before heading off for projects in Sierra Leone, Uganda, New York City, and here in Newark. The Pozens, who gave \$1 million to NJMS in 2009, explain, “We hope that our gift inspires future physicians to develop a passion for providing community service by working in neighborhood clinics and organizations so they can provide the people of Newark and elsewhere with quality healthcare.” Read the passion in the accounts of their experiences.

**Ahmed Sesay** worked with the German Leprosy and Tuberculosis Relief Association (GLTRA). “I was born and raised in Freetown, Sierra Leone. I understand what it means not to have adequate healthcare. I left in the midst of civil war, and always dreamed of returning. I traveled the hinterlands to make-shift leprosy villages, community centers, clinics and individuals’ homes. Our mission was the social rehabilitation of leprosy patients. I will never forget a 21-year-old woman suffering from TB and AIDS who was paralyzed, dying, and abandoned by her family. Asked if she was aware of her condition, she replied, “Yes, I am supposed to die any day but I woke up happy, despite the fact that my cell phone was stolen last night.” She forced me to put my life into perspective and to realize how irrelevant some of my worries are. The director of the GLTRA, Dr. Yvonne Harding, told me: “You are not successful until the person next to you is successful.”

**Fatemah Mamdani** took part in the New York City Mayor’s Literacy Fellowship...“I taught health literacy at an adult education center in the Bronx called Highbridge Community Life Center. One lesson was about reading a nutrition label. I was surprised. People didn’t understand general concepts like ‘Too much sugar is bad for you.’ Knowledge I take for granted is just not common knowledge for all populations. Later, at Mount Sinai School of Medicine, I worked on a project assessing the impact of religious and spiritual beliefs on Latino parents’ access to mental health services for their children.”

**Eric Levy** stayed in Newark and went to Barringer High School. “Students Learning About Medicine, or SLAM, is a mentoring/education program started with the help of the Latino Medical Students Association (LMSA) to inspire youth to consider healthcare careers. At Barringer, the response was tremendous and 80 signed up the first day. Students were amazed. Some wished they had known about

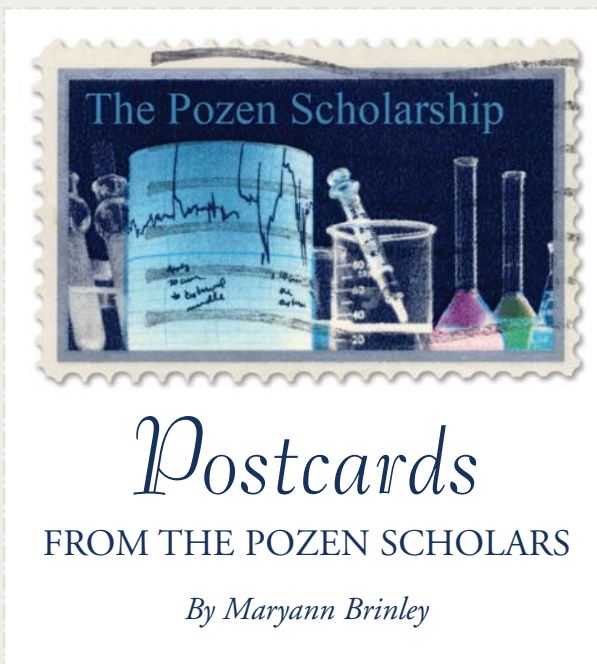
healthcare careers earlier. We made long-term relationships, exchanged emails and numbers and we’ll be there for them as they move on to college and beyond. SLAM is now in year two.”

**Jessica Spiegelman, Allison Jeddiss, Katherine Lubarsky and John Flynn** had to evacuate from Uganda after a bombing, but not before they experienced the inequities of African healthcare up close. Jessica reports: “Medicine is a universal language. Meet an MD, or in our case, a med student, from anywhere in the world, and you will understand each other perfectly. You speak the same language, live in

the same culture. It is extra frustrating, then, to be in a hospital like Mulago. Basic amenities, things that we would consider necessities at home, are impossibilities in Uganda. The Ugandan doctors learn what we learn; they know what we know. They know that a patient with kidney failure, like one of the patients Katherine and I treated on our infectious disease rotation, needs dialysis, but they can’t get it for him. They know that lumbar punctures should be sterile procedures performed with anesthetic. But a perfectly sterile environment is laughable, and lidocaine is a rarity. Neurological disorders that could be easily diagnosed with an MRI are missed, because there is only one MRI machine in all of Uganda...It would be easy to get lost in depression at Mulago. Instead, we tried

to focus on the things that were great about Mulago—namely, that we were getting clinical training a year in advance, and that the kids in this country are amazingly resilient.” To read more of “Under African Skies” go to the online version of *Pulse* on the NJMS website.

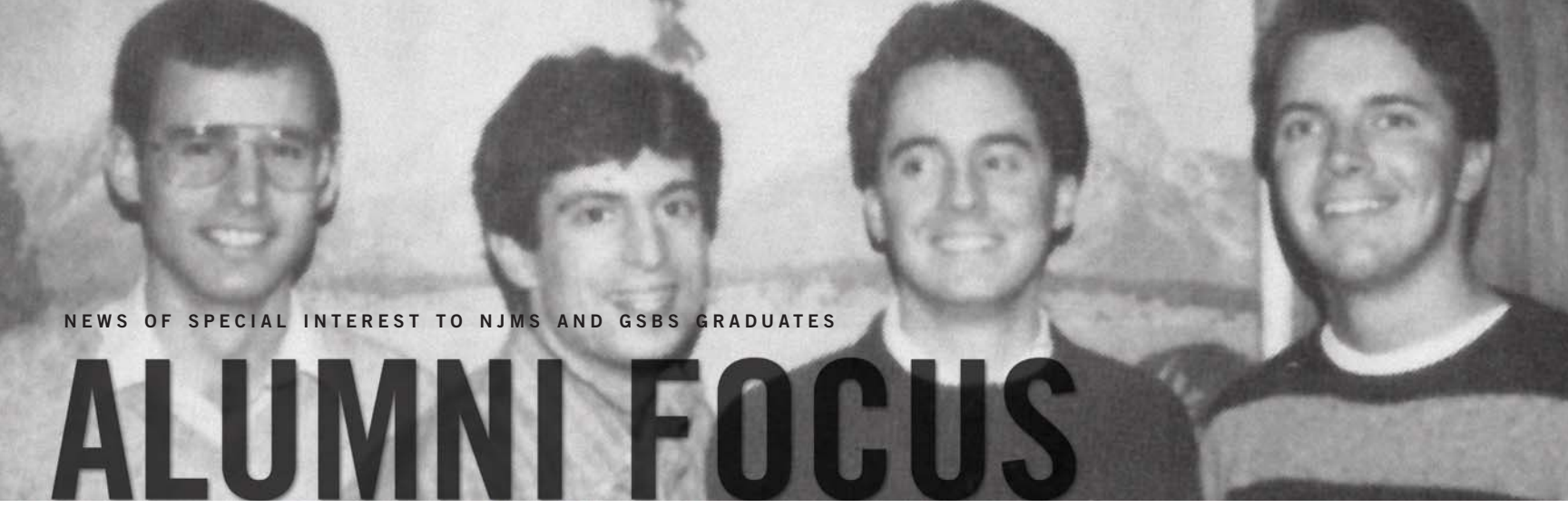
**Leila Mady** looked at the statistics for obesity and chronic diseases in the Newark area and decided to address their risk factors, particularly among children and adolescents. Her idea for a “Healthy Lifestyles Community Fair: Fun Tips on Living a Better Life” evolved into a collaborative initiative with the Downtown Newark YMCA, which holds a Healthy Kids Day annually. She explains, “My Pozen project was the first time UMDNJ and the YMCA worked together for Healthy Kids Day. The concept behind the fair was to allow members of the Newark community to learn and experience healthy lifestyle choices through live demonstrations and workshops on nutrition, fitness, and physical and mental well-being. I remember two middle school children enthusiastically recounting all the ways to cook food without frying, how they were going to add more greens to their meals and why they promised to snack on healthy fruits like apples. Students from all UMDNJ schools took part and it was memorable to see some who had never worked together cooperating in a unified goal: to eliminate health disparities in Newark.” ●



## Postcards FROM THE POZEN SCHOLARS

By *Maryann Brinley*





NEWS OF SPECIAL INTEREST TO NJMS AND GSBS GRADUATES

# ALUMNI FOCUS



## A Conversation with the New UMDNJ Chair

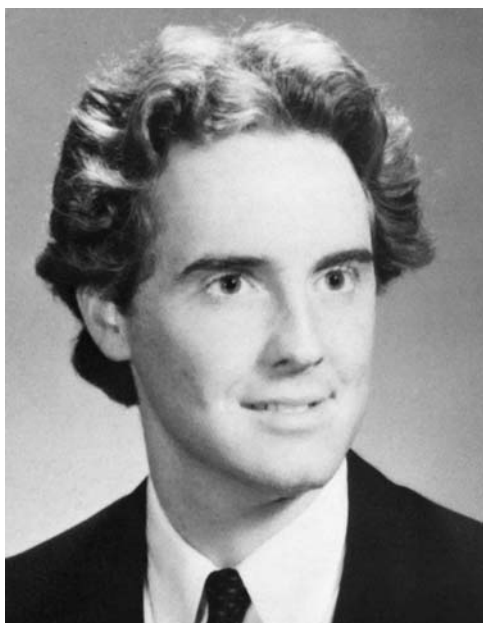
By Kaylyn Kendall Dines

The year was 1987. It marked the pivotal point when Kevin Barry transitioned from being a student at NJMS to becoming a graduate of the medical school. (Yes, that's him, second from the right above). This is the man who dreamed of a career in medicine when he was just a child. Now, he's ascended from classrooms and clinics to the boardroom.

*Story on page 32*

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Kevin Barry, class of 1987

Before our interview began, his presence was confident yet his demeanor would put almost anyone at ease. Extending a hand, he says, “Hi, I’m Kevin.” That would be Kevin M. Barry, MD, MBA, who was appointed to succeed Robert Del Tufo as Chairman of UMDNJ’s Board of Trustees by N.J. Governor Chris Christie in September 2010. He was originally appointed to the Board in 2007 by Governor Jon Corzine. He is, in fact, the first alumnus of UMDNJ to claim this top leadership position.

Barry, an attending anesthesiologist at Morristown Memorial Hospital, has also served as a member of the Board of Directors at the UMDNJ–University Hospital, as president of Anesthesia Associates of Morristown since 1994, and on the healthcare transition team for the Christie Administration. He pledges his allegiance to the entire University-wide system rather than to a particular unit.

*Q: Describe what this means to you to be named the 13th Chair.*

A: It is both a privilege and an honor, especially returning to the Stanley S. Bergen Building, which I still at times reflexively refer to as Martland Hospital. I completed a clinical rotation downstairs and received a

set of vaccines in ’86 there before heading off to Kenya for a medical mission. This is home. I’ve come full circle.

*Q: What is your vision for the future?*

A: The past is behind us. As a result of Bob Del Tufo’s leadership, the University is positioned to make greater strides towards becoming a national leader in health education and research. We are poised to leverage our tremendous expertise and link with industry leaders worldwide. We will be partnering with pharmaceutical, biotech, engineering and life sciences industries to create innovative products, treatment methods and medications. Great potential exists for improving quality care, creating jobs and generating revenue.

*Q: Do you have a message for students, faculty, staff, and administrators statewide?*

A: Yes, we’ve survived a number of tough years. Our resilient faculty, staff and students knew the true value and greatness of the University. We were beaten up on a daily basis by the press. That’s over. The staff, faculty, and students, all loyal members of the UMDNJ community, enabled us to weather the storm. Be proud of who you are and your accomplishments. I can tell you that the Board is very proud of you!

In the past, the alumni tended to identify with a school, rather than the University. Remain loyal to your school, but please recognize that you’re also connected to a larger entity, which is a relatively young university. Our history dates back to the 60s. In the life span of a university, we’re a toddler. Toddlers stumble and fall, but they get up on their feet. We’re poised to run.

Universities established a hundred years ago or more have strengthened their financial bases by building huge endowments. This is not necessarily as enviable a position as it may seem to be at first glance. When you consider UMDNJ’s faculty, public and allied health professionals, staff, dentists, nurses, physicians, and aspiring students, we have a huge endowment of talent, potential and skills. We too will get there with

financial endowments! It takes time.

*Q: Please share your experience and perspective on medical education.*

A: Health professionals nationwide are facing an increasingly older and more diverse patient population. We as a nation are facing a shortage of healthcare professionals. It is incumbent upon us to educate a sufficient number of highly-qualified, compassionate professionals who stay ahead of the curve by constantly gaining knowledge and passing that knowledge on to the next generation.

I’ve noticed a shift in medical education, particularly at UMDNJ, of accepting students who are genuinely interested in the humanitarian aspects of medicine. When I went to school, my classmates and I predominantly majored in the hardcore sciences. I loved being in labs. I loved physiology, pharmacology, biochemistry. As such, my natural inclination was to move into a field like anesthesiology. Other students may have been drawn to specialties that impact the cultural and societal aspects of healthcare because of their natural inclinations and interests in these areas. How do we keep students engaged and incentivize them to move into a field whether it is clinical practice or bench research? This and other questions need to be answered so we can address shortages in fields like primary care.

*Q: In 200 years, what do you want people to know and remember about you?*

A: No matter what I build or accomplish, it will never be as important as my being able to instill in the younger generation of health care professionals the true sense of privilege and excitement of being in medicine. I tell students there will be patients that you will care for and cure. Sadly, some patients can’t be cured but all of them can be cared for. I want to be remembered as someone who instilled in the younger generation the importance of developing good technical skills, but more important, of having the kind of love for medicine that embraces the sacrosanct privilege of treating people with dignity and respect. ●

## Alumni-Powered Scholarships

Alumni Affairs Director Dianne Mink has seen some of our med students at their lowest because the burden of paying for school just becomes too much to contemplate. They come to us for help, and for good reason. According to the American Medical Association, a medical student graduating in 2009 had to start paying off \$156,456. Here are other figures that make me cringe:

- 79 percent have debts of at least \$100,000.
- 58 percent have loans amounting to at least \$150,000.
- 87 percent of all graduating medical students carry outstanding loans that will certainly impact the way they practice medicine and their choice of specialties.

We can do something about the kinds



of high debt that create personal crises for our students by donating to the Alumni Association scholarship fund. The 119 thankful students—the winners were announced at the banquet on Oct. 26, 2010—can now breathe sighs of relief. To find out how you can help another medical student breathe a sigh of relief, call (973) 972-6864 or email [minkda@umdnj.edu](mailto:minkda@umdnj.edu).

**JAMES OLESKE, MD'71, MPH**  
PRESIDENT, NJMS ALUMNI ASSOCIATION



**Left:** Dr. and Mrs. Dennis G. O'Neill'79 (left) have honored Dennis P. Quinlan, Sr., MD'69 (right), by establishing an endowed scholarship which was presented this year to Jill Humphries'11.

**Above:** Judith Korek Amorosa, MD'70 (left), and Louis F. Amorosa, MD'69 (right), donors of the Loran and Klara Korek Scholarship and Anna Amorosa Scholarship respectively, proudly present their scholarships to Ronak Shah'11 (left) and Anthony DeCicco'11 (right).

### NJMS CALENDAR OF EVENTS

#### March 3 Alumni Association Board of Trustees Executive Committee Meeting

Student Affairs Conference Room, MSB C654, 6 pm

#### March 10 Humanism Day

MSB – B552, 5 pm, Speaker: Danielle Ofri

#### May 13/14/15

#### Alumni Reunion Weekend

May 14, Gala Dinner Dance, Sheraton Parsippany Hotel, celebrating the 50th anniversary of the Class of 1961; 25th anniversary of the Class of 1986; and all alumni milestones. For information, contact Dianne Mink at [minkda@umdnj.edu](mailto:minkda@umdnj.edu).

#### May 15

#### Komen North Jersey Race for the Cure

#### May 23 Convocation

New Jersey Performing Arts Center

#### May 25 Commencement

IZOD Center

#### June 16 Alumni Association Board of Trustees Annual Meeting

Rosemary Gellene Room, MSB B515, 6 pm

## Save The Date

Start your reunion weekend festivities early by attending a day-long symposium followed by a gala celebration in recognition of **Peter W. Carmel, MD**, Chair, NJMS Department of Neurosurgery, as he assumes the office of American Medical Association president in June 2011.



### Thursday, May 12, 2011

**SYMPOSIUM:** Innovators and Educators in the Art and Science of Neurosurgery  
Delta Dental Conference Center, at NJDS (Newark Campus) • 9 am – 4 pm • Free

**GALA:** Liberty House Restaurant • Jersey City, NJ • 6:30 pm – 11 pm  
*Proceeds will benefit NJMS Neurological Institute of New Jersey*

**INDIVIDUAL GALA TICKETS:** \$300 per person  
*Gala sponsorships available from \$1,000 – \$25,000*

*For more information or to reserve your seats, contact LaDawn McClamb at (973) 972-1164 or [mcclaml@umdnj.edu](mailto:mcclaml@umdnj.edu).*

## In the DaCosta Family, Medicine Matters

By Maryann Brinley

Meet the DaCosta family. Their busy gastroenterology practice is located in a typical medical office off Route 280 at 85 South Jefferson Street in Orange. The place teems with patients several days a week. “In an afternoon,” explains Theodore A. DaCosta, Sr., MD, “we’ll sometimes see 50 patients.” But their practice is anything but typical. This office is full of family, even grandson Teddy, a pre-med major at Seton Hall University. And though Dr. DaCosta, Sr., turned 80 last March and was in the first graduating class of the Seton Hall College of Medicine, which later became NJMS, he too is still there three days a week. His wife, Johanne DaCosta, RN (“the life support of our practice,” says her husband), is in the office every working day and has been his nurse since 1964 when they opened their practice. In the DaCosta family, medicine matters very much.

Father, mother, sons, daughters, daughter- and son-in-laws, uncles, cousins and grandsons all follow in the family footsteps. They don’t choose these tough professional roads out of duty, however, or because of any coercion at home. As son Theodore DaCosta, Jr., MD, NJMS ’89, explains, they select medicine because of “the passion for patients we learned from our parents, coming into the office to be with them as children, sensing how much they love what they do. There was never any pressure to become a doctor. We want to be here.”

His dad, seated across the room, has obviously loved practicing medicine. “It all started with my mother,” Ted Sr. explains. “She wanted to become a nurse but had too many children” and stumbling blocks thrown into her path. Raised in Jamaica, Ted Sr. spent 20 years there after the family moved to the island when his father’s trans-



Ted Sr., Johanne, Ted Jr., Teddy and Nancy DaCosta Giten

portation business in the U.S. went bankrupt during the depression. His book, *Lady in Blue*, is a fictionalized account of the “very tough but fulfilling life we had in Jamaica.” Ted Sr. sees his mother’s story as “rags to riches” inspiration.

“We love our patients and we are here for them.” He recalls a classmate years ago who wondered why they hadn’t moved the practice out to a more affluent suburb. “Did we go into medicine to make money?” he replied. “Did we take an oath to take care of only one kind of patient, not the ones on Medicaid?” Their answer was obviously no.

Second son, John DaCosta, MD, NJMS’91, is currently in Kentucky working in a poor area where there had been no gastroenterologist for hundreds of miles. It’s a temporary post where he’s also getting experience in performing ERCP (endoscopic retrograde cholangiopancreatography), a test that can diagnose numerous disorders in the bile ducts, gallbladder and pancreas. John’s

wife, Maryann DaCosta, is an RN who has also worked in the family practice. “Kind, compassionate and a fantastic nurse, we hope to get her back,” Ted Sr. admits. Ted Jr.’s wife, Judith DaCosta, PhD, earned her doctorate in microbiology from UMDNJ and spent years in the office as well. Meanwhile, the DaCosta’s first child, daughter Anna Maria, graduated from the University of Pennsylvania School of Medicine and is a pediatrician at Children’s Hospital of Philadelphia (CHOP). She’s married to yet another doctor, John Choi, MD, PhD, chief of hematology at CHOP. And their fourth child, Nancy DaCosta Giten, PhD, completed a doctorate in clinical psychology at Hahnemann University and is in private practice in New Jersey. “We worked so hard to pay all those bills. Four kids: four education loans,” Johanne sighs.

Ted Sr. and Johanne met 50 years ago at St. Michael’s Medical Center in Newark when she called for an intern to assist with a

patient who was unable to breathe. “I needed help cranking up the bed. Remember those old beds? Ted walked in and I got a shock,” she says laughing.

“Really?”

“No...but really, it’s true. It was emotional but just as shocking,” Johanne recalls, laughing. “That’s how we met.” Her husband agrees that it was love at first sight. “I went home and told my roommate, ‘I fell in love tonight,’” she says.

After their marriage in 1961, their children started to arrive in 1962, ’63, ’65, and ’68 but that didn’t stop the pair from making miles of house calls. “The older doctors would sign out and younger ones would be on call. For \$5,” he says, “and we didn’t always get paid.” This meant driving to 40 or 50 homes days, nights, or weekends, to Livingston, Paterson, the Oranges, Kearny, Belleville, Harrison, anywhere. “Ted would get lost,” Johanne remembers, “so I would navigate. We had no GPS then. No Mapquest. Just me.” Navigating northern New Jersey, where so many street names are repeated in various towns, sent them on wild escapades. Imagine being at the right number house, on the right street but in the wrong town. “There we were, ringing the wrong doorbell in the middle of the night.”

Ted Sr. remembers a visit to the Newark home of gypsies. The matriarch, or “queen,” was in bed with pneumonia. “The ‘king’ accompanied me to her side and gave me a comprehensive history. I checked her and she had pneumonia. In those days, a shot of penicillin took care of this condition so I gave her a shot and then a script for antibiotic tabs.” When he got ready to leave, this king didn’t want to pay. “I stared him in the face and explained that the fee was \$5. He laughed, said there was no need to pay because the injection had already been given.” Ted Sr. had been warned about gypsies, stood his ground and told this powerfully-built guy that he had given the old woman water, not penicillin. “You cheat me and your wife won’t make it,” he said. Out came the \$5. After he gave the patient a second shot, the king called him “wise one,”

hugged him and shook his hand. “He had met his match,” Ted Sr. recalls. “That second shot was the saline, not the first. This family became my patients and they never tried to pull the wool over my eyes again.”

Perhaps his experience in that charter class in medical school helped prepare him for almost anything on the job, even those gypsies. “We were the first class and actually received more training than most. Our third year, in fact, was more like internship. By the time I graduated, I had already delivered

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**Making miles of house calls  
for \$5 each meant driving to  
40 or 50 homes days, nights,  
and weekends.**

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more than 100 babies,” he says. There had been 5,000 applications for 80 spots. Classmates were “extremely bright.” Some were off the charts intellectually. Leo Pisculli, MD, for instance, had a photographic memory. “I’d give him a large amount of text to look at for 3 minutes. I’d take it away, wait 5 minutes and he’d be able to recite it word for word. The night before a test, he’d look at the book and know everything. He became a psychiatrist because he liked listening to people telling him stories and figuring out what was wrong.” (See page 10 for “Road Trip Circa 1959.”)

Ted Sr., on the other hand, is a hands-on physician. He chose gastroenterology when he “looked into the future” and could see where it would take him. The specialty has changed over the years, but so much about health still revolves around the gut, he believes. “I learned to use those old endoscopes in very flexible ways. I was pretty good.” His son Ted agrees. “There is no doctor like my father. He is the gentlest, most wonderful, caring physician.”

The family is currently setting off in a new direction: collaborating on a weight

reduction center that will combine nutrition and exercise interventions with endoscopic and bariatric surgery. “Our plan is to be hospital-based at St. Michael’s Medical Center,” Ted Jr. explains. In fact, the idea came from grandson Teddy, who told his father, “You know Dad, our patients are overweight.”

“I told him to come up with an idea to help our obese patients lose weight. And we did,” Ted Jr. says. “Obesity is one of the most serious problems facing healthcare today.”

If laughter makes the best medicine, it’s easy to see why the DaCostas are a family of healers. They laugh a lot and are unafraid to show their emotions. Take their account of the terrible fire that destroyed their first office in East Orange. The tale is told with humor, not angst. Johanne remembers, “It was 1991 and on Thanksgiving night. We got a call from another doctor’s wife whose practice was in the same building. ‘Johanne,’ she said, ‘We don’t have an office anymore.’ There was a fire. You don’t have one either.”

Their office with patient records, equipment and 27 years of memories would have been completely destroyed if it weren’t for the fact that one of the firemen was a DaCosta patient. “Luckily, he got there first and saved us,” Ted Sr. adds. “This examining table came from there,” he points out. It does have an antique look to it. “We hung the wet paper records up to dry,” Johanne explains. “We put them on clotheslines, like damp laundry.” Together, they laugh about what could have been a terrible disaster but wasn’t in the end. “Look at those burnt edges up there,” she says, indicating the framed diplomas, certificates and awards on their office wall. All have a slightly charred but artsy look.

Sitting opposite his dad, across from the rescued examining table is Ted Jr.

“Everybody has a hero,” he says. “But not everyone can have their best friend be their father as well as their hero.” There’s a long pause in the room all of a sudden. And with that note, the laughter stops and a few tears are shed. ●



MARJORIE JONES, MD'60

## Fifty Years Later: Plenty of Stamina

By Tryon Baldwin

Marjorie Jones received a less than enthusiastic welcome when she started medical school in the fall of 1956. “The men in the class approached us women,” she recalls—there were nine, out of a class of eighty—“and told us that they were upset because we were never going to practice medicine. They said they wouldn’t help us because we were taking places that could have gone to men who would go into medicine, while all we were going to do was get married and have children.”

Jones can laugh at the memory now, largely because the whole thing blew over in just a few weeks and, as she’s quick to add, the men and women in her class became good friends and helpful colleagues. It’s a good thing, too, because—to be blunt—

those poor guys had no idea just who they were dealing with.

Born in Harlem, Jones, the child of immigrants from Guyana, had learned a thing or two about being doubted long before medical school. She’d seen her father deal with it. “He worked in the post office,” Jones says, “but he gave up that job to go to dental school. His friends ridiculed him for that. They thought he was crazy to give up a secure government job.”

Her mother took in laundry to support the family while her father was in school, and he promised that, once he was in practice, she would never have to work again. “He kept his word,” Jones says. “My mother stayed at home with us children. Then again, that meant we couldn’t come home and

think we could go out and play. Schoolwork and then housework, those came first.”

When Jones was 10, her family moved to Mt. Vernon, NY, where the rule in her home remained the same as it had been in Harlem: settling for less than you were capable of was simply unacceptable. In high school, for example, when Jones told her father that she might like to be a nurse, he encouraged her to become a doctor. “That way you can give the orders,” he said.

Jones attended St. John’s University in Brooklyn, where she took the pre-med curriculum (and where, unsurprisingly, she encountered the same attitude from her male fellow students). She enrolled at Seton Hall College of Medicine (now NJMS) right after college, entering the charter class.

Remembering those days now, she admits that she wasn’t always as confident as she seemed. “In the back of my mind, I did wonder, ‘How am I going to have a family and practice medicine, too?’” She didn’t discover a solution to her conundrum until her last year, when she met a female pediatrician who worked out of a home office. “I thought, ‘Hey, I can do that,’” she says.

Jones and her fiancé married just before her residency, and her daughter, Jeanine, was born a year later. She was afraid she’d be kicked out of her program, but an aunt moved in to help with the baby, and she made it through.

“We were Catholic,” she says. “Birth control wasn’t an option. But that rhythm method, it just doesn’t work.” She laughs and adds, “I had three children on the rhythm method.” (Jeanine, a dermatologist, has two younger brothers: Michael, an English professor, and Mark, a television producer.)

Jones opened her own pediatric practice in 1966, and still works in that same home office four days a week. On Wednesday—her day “off”—she runs a clinic at Holy Name Hospital in Teaneck for children whose parents can’t afford medical care. She’s also on staff at Englewood Hospital and serves as physician for the Hackensack school system. “I cover five elementary

schools and one middle school,” she says, “doing physicals, testing, immunizations.” As if that weren’t enough, Jones has gone on medical missions to Peru, and, in April 2010, her church sponsored a trip to Haiti.

“There was so much trauma there,” she says. “Injuries and disease. Skin rashes from sleeping on mud floors. I went down there to treat children, but I wound up seeing adults, too.”

Jones still loves medicine. When pressed, she will allow that it might be time to slow down. Demanding insurance companies and rude parents have taken their toll. “I’ve been thinking about giving up the home office,” she says. “But I’d like to keep up with the clinic and the schools. I still have plenty of stamina. Maybe I’ll try semi-retirement.” ●

## Focus on Philanthropy

*Continued from page 40*

a difficult academic schedule is largely behind him and he’s focusing on clinical rotations. “I’m not sure what specialty I’ll choose, but I’m inspired by Dr. Deitch and thinking seriously about general surgery,” he says.

The scholarship, which included a \$10,000 prize, has been a tremendous help. “I don’t come from a wealthy family,” he says. “My dad is a contractor and he’s worked hard to help me with my education. Still, like most medical students, I have enormous loans.”

The scholarship also puts him in good company. The awards are sponsored by MDAdvantage, a large provider of medical professional liability insurance. Past winners have included some of New Jersey’s most distinguished physicians. “I haven’t done a tenth of what past awardees have accomplished, but I hope to follow in their footsteps one day,” says Bonitz. ●

## JAMES NETTERWALD, PhD

UMDNJ–Graduate School of Biomedical Sciences '05

# Bringing Dead Science Writing to Life

Two roads diverged in his professional world and James Netterwald, PhD, GSBS '05, decided to take the path less traveled by scientists with PhDs in microbiology and molecular biology. After getting his bachelor’s degree in clinical laboratory science from New Jersey City University in 1998, he spent six years earning that doctorate from UMDNJ–GSBS in Newark and working in a research laboratory. After graduation, he decided that life in the lab was not exactly his final destination. “My new career was born out of a desire to live the life of a college professor without having to obtain a fulltime faculty position. I wanted to perform life science research without having to write grants...but I wanted to spend the lion’s share of my time writing articles and books,” he admits. So, with his new doctorate in hand, Netterwald took his first professional writing job as an associate medical director at Medical Knowledge Group in New York. One year later, he left to pursue an editorial position in publishing at a small pharmaceutical trade publication called *Drug Discovery & Development* magazine, where he was a staff writer and editor for three years. In April 2009, he founded BioPharmaComm, LLC, to provide writing, editing, and consulting services to life science industries.

“My clients include science trade publications, medical education, pharmaceutical and public relations companies. As a seasoned writer and editor, I know what it takes to clearly communicate science to the world,” he says. “By bringing my unique style, depth, clarity and polish to a project, I can bring previously dead, ineffective writing back to life.” Even a quick reading of Netterwald’s sample stories posted on his website, <http://www.nasw.org/users/netterjr/> demonstrates his ability to make scientific topics soar journalistically. Imagine a story about polymerase chain reaction (PCR), for instance. Interesting for the non-scientist? Probably not. Yet, here’s how Netterwald invites readers into his world: “Was Kerry Mullis insanely brilliant or brilliantly insane? That is the question. And polymerase chain reaction (PCR) is the answer.” Everything from epigenetics and autism to neuroimaging, peptide-based therapeutics, and drug repositioning receive this expert treatment.

Last October, an essay by Netterwald titled “Back to the Lab” and published in *The Scientist, Magazine of the Life Sciences*, caught our attention. Turns out that this science-writer missed life in the lab. “I was told it couldn’t be done—a writer could never return to the lab after a five-year hiatus. Part of me wanted to prove them wrong,” he explained in his published piece. And he did. Netterwald has been doing research in the laboratory of William Ward, PhD, a Rutgers University professor and president of a small biotechnology company, Brighter Ideas, Inc., specializing in the production of antibodies against green fluorescent protein. “I’m a visiting scientist. Returning to the lab is possible; it just takes a little adjusting.” But he’s also a writer and entrepreneur, proving that it is possible to choose more than one professional road. To reach Netterwald, email: [james.netterwald@yahoo.com](mailto:james.netterwald@yahoo.com). ●



# ROSEMARY GELLENE

## Remembering

By Lisa Jacobs

Fifty years after NJMS graduated its first class of physicians, one student's name has remained part of the University community's daily vocabulary. Rosemary Gellene may be familiar to anyone who has ever attended an event in the alumni center that bears her name and houses her portrait, but her professional accomplishments and substantial contributions to medicine before her untimely death at age 50 may be less commonly known. The next time you are in room B-515 in the Medical Science Building (MSB), take a closer look at the largest picture on the wall. It stands out prominently, right in the middle of a long line of men, just as she did in her life.

Gellene is most famous for her influential research on L-DOPA as a pharmacologic agent in the treatment of Parkinson's Disease. Swedish scientist Arvid Carlsson initially recognized dopamine's importance as a neurotransmitter and its physiological relevance. For his contributions, Carlsson received the 2000 Nobel Prize in Physiology or Medicine. But, the high dose L-DOPA injections pioneered by Carlsson in the late 1950s proved toxic and were considered unsafe and impractical.

It was Gellene working with George Cotzias at Brookhaven National Laboratory from 1966 to 1969 who demonstrated that oral administration of L-DOPA at sequentially higher doses resulted in substantial remission of Parkinson's symptoms. She translated Carlsson's concept into a practical treatment that is still considered the gold standard today. Gellene was the third author of the 1969 *New England Journal of Medicine* article that first described this treatment, "Modification of Parkinsonism—chronic treatment with L-DOPA."

Gellene was passionate about education. Before joining NJMS's charter class, then Seton Hall College of Medicine, she earned a bachelor's degree from the College of St. Elizabeth and a master's from Boston College. Medical school classmate Anthony Sossi, MD'60, fondly remembers how the "great excitement in the creation of the college of medicine transmitted to all of us students in that charter class." He describes Gellene as "a serious student and a good one, who worked hard and cooperatively" and whose interest in academic medicine was readily apparent.

After graduation from med school, Gellene completed an internship and residency at Jersey Shore Medical Center, an institution to which she maintained close ties throughout her life.

There, she served first as attending physician before being promoted to assistant director and later director of medicine. She was also the hospital's teaching coordinator and established an accredited training program in internal medicine in 1975. It was at the Jersey Shore Medical Center that Gellene died suddenly in 1985 of a cerebral hemorrhage. She was survived by her parents and three brothers, who requested donations to the institution in lieu of flowers in her funeral announcement.

A lifetime learner, this woman completed post-doctoral fellowships at St. Luke's Hospital and at the National Institute of Health focusing on liver diseases. She graduated from Harvard University Graduate School for Health Systems Management in 1975 and at the time of her death in 1985, she was completing a fellowship in infectious disease at Memorial Sloan Kettering.

Gellene was a clinical associate professor at UMDNJ and maintained two private practices in internal medicine, the first of which she opened in Belmar in 1966 and the second in Jersey City in 1980. She consulted for the Departments of Medicine at both Point Pleasant Hospital and Freehold Area Hospital.

A leader, she acted as a trustee for both the Foundation of UMDNJ and the Academy of Medicine of New Jersey, where she later became that institution's first female president. She was a fellow of the American College of Physicians and a diplomat of the American Board of Internal Medicine, the American College of Chest Physicians, and the National Board of Medical Examiners. She also served as a council member for the New Jersey chapter of the American College of Physicians, the American Federation for Clinical Research, the American Association for the Advancement of Science, the Academy of Medicine of New Jersey, and the New Jersey Society of Internal Medicine.

From 1975 to 1984, Gellene was on the board of trustees for the NJMS Alumni Association. Shortly before her death, she was appointed president. Saddened by the sudden loss and in recognition of her service to the school and outstanding contributions to the field of medicine as a clinician, instructor, and researcher, the association funded the remodeling and dedication of room B-515, MSB, as "The Dr. Rosemary Gellene Alumni Center." The association also keeps her name alive through the Dr. Rosemary Gellene '60 Memorial Scholarship awarded each year in her honor. ●



## 1960'S

**Eugene Cheslock, MD'65**, is president of the Parker Family Health Center in Red Bank, a free community clinic he founded to care for the uninsured. Cheslock was noted by Healthcare Heroes in July 2010 and received the Volunteer of the Year Award.

**Thomas Kiernan, MD'67**, retired from the Charlie Norwood VA Medical Center, Augusta, GA, in January 2010.

**Maurice Meyers, MD'60**, was named a Knight (Chevalier) in the French Legion of Honour by the French government and received the decoration in New York City on November 11, 2010. His book, *Reflections on My War*, was just published by Bluewood.

## 1970'S

**Thomas Dayspring, MD'72**, clinical assistant professor of medicine at NJMS and an attending physician at St. Joseph's Regional Medical Center, has lectured in all 50 states on heart disease, especially as it affects women.

**Richard Blumenfeld, MD'72**, joined a 12-person cardiology group in Framingham, MA. He practices cardiac care at Beth Israel Medical Center in Boston and has also been a clinical instructor in medicine at Harvard Medical School since 1993.

**Peter Dorsen, MD'72**, teaches Western Medicine and pathology at the American Academy of Acupuncture and Oriental Medicine in Roseville, MN.

**Richard W. Huss, MD'71**, lives in Potomac, MD, and has been enjoying retirement. He would like to hear from classmates.

**Paul LoVerme, MD'78**, has been appointed chair of surgery at Mountainside Hospital in Montclair.

**Carlo Mainardi, MD'72**, is the chair of medicine at the Woodhull Medical Center in Brooklyn, NY, and clinical professor of medicine at the NYU School of Medicine. His son, **Timothy Mainardi, MD'06**, is a fellow in Allergy/Immunology at Columbia, and

daughter-in-law **Alison Mainardi, MD'09**, is a second-year resident at St. Luke's Hospital, NY.

## 1980'S

**Marla Gold, MD'85**, is dean of the School of Public Health, Drexel University College of Medicine in Philadelphia.

**Randall F. Holcombe, MD'83**, colon cancer expert, joined the Mount Sinai Medical Center, NY, as director of clinical cancer affairs in The Tisch Cancer Institute and director of gastrointestinal medical oncology for the Division of Hematology/Oncology.

**Gerard Pregenzer, MD'83**, announced that his daughter Laura was married in August 2010.

**Robin S. Schroeder, MD'86**, husband **Donald C. Schroeder, MD'86**, and children Megan, 23, and Colin, 19, are doing well. Robin is on the NJMS faculty (loves the medical students) and Don is a radiologist at St. Barnabas Medical Center, Livingston. Come to the gala (May 15, 2011) for the 25th anniversary of our graduation next year. Get in touch! [schroers@umdnj.edu](mailto:schroers@umdnj.edu).

**Michele Torchia, MD'86**, is medical director and vice president of medical affairs for Complete Care, a federally funded health network in southern NJ. Torchia will complete an MPH at the University of North Carolina, Chapel Hill, this spring, has been married to Richard Feltman for 29 years, and has three daughters.

## 1990'S

**Oxiris Barbot, MD'91**, is the new commissioner for the Baltimore, MD, Health Department. The former medical director of NYC's Office of School Health where she created an electronic medical records system for more than a million students, she was chosen for the new position because of her experience with underserved populations.

**Aimée D. Garcia, MD'94**, was one of 16 doctors chosen by QuantiaMD to receive a Community Choice Award

for "innovation and excellence in sharing knowledge." Garcia, an expert in wound care, practices in Houston, TX.

**David Kim, MD'98**, was happy to reconnect with his medical school housemate, **Robert Cooper, MD'98**, for the first time in more than 10 years. "It was great to reminisce about the good old days at NJMS."

**Carlos Mayer-Costa, MD'94**, is working in a wonderful family practice office and was recently appointed director of the BHS Whole Medical Spa in PA.

**Ana Natale-Pereira, MD'96**, and husband Gustavo Pereira are the parents of son Daniel and triplets Sofia, Victoria and Lucia. (Read her story on page 14.)

**Stephen Sun, MD'96**, joined the U.S. Food and Drug Administration as a medical officer and is presently enrolled in the Johns Hopkins School of Public Health MPH program.

## 2000'S

**David Adinero, MD'00**, was inducted this year as a Fellow of the New York Academy of Medicine.

**Tanya Chadha, MD'08**, was married to Shailesh Sachdeva last year and has changed her last name to Sachdeva.

**Allison Froehlich, MD'03**, has been working for two years at Endocrine Associates, PA, which is affiliated with Valley Hospital in Ridgewood.

**Lowell E. Gurey, MD'06**, and **Keren Bakal, MD'07**, were married Memorial Day weekend, 2010, in Livingston. NJMS alumni attending the event included Kapil Paghdal, MD'08; members of the class of 2007: Drs. Danielle Bertoni, Molly Barry, Monique Espinosa, Aisha Phillipson, Andrew Azer; from the class of 2006: Dr. Erick Clinton, and from the class of 2005: Drs. Jay Hauptman and Elliot Dehaan as well as NJMS Professor Kenneth Swan, MD. Keren recently completed her training in internal medicine at Boston Medical Center and is working as a hospitalist in Albany, NY, while Lowell finishes his otolaryngology residency at Albany Medical Center. Both will be moving to New York City in July for further training; Lowell as a laryngology fellow at St. Luke's/Roosevelt and Keren as a Pulmonary/Critical Care fellow at NYU.

**Sara Lubitz, MD'03**, is on the faculty at UMDNJ-RWJMS in New Brunswick, NJ.

**Jason W. Mitchell, MD'04, MPH**, a vascular and interventional radiologist with Vascular and Endovascular Specialists of Ohio, is on the MedCentral/Mansfield Hospital medical staff.

**Erin Rebele, MD'06**, is an assistant professor, ob-gyn, at Vanderbilt University, TN.

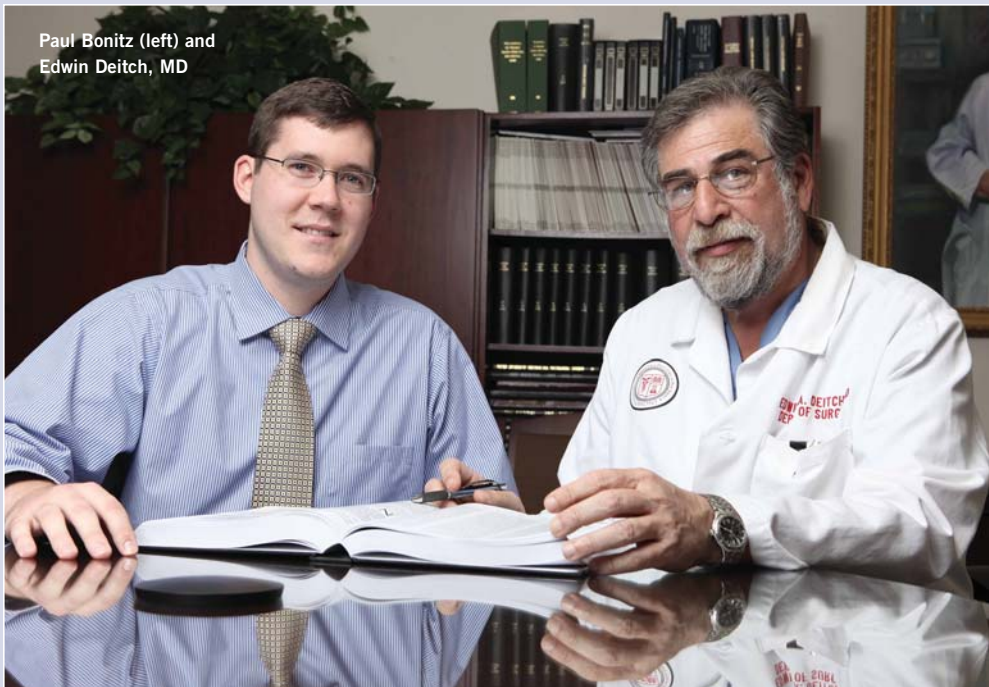
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**Alumni Association of NJMS**, 185 South Orange Avenue, MSB-B504, Newark, NJ 07101-1709. Photos are welcome. You can also send your news via e-mail to: [njmsalum@umdnj.edu](mailto:njmsalum@umdnj.edu) or fax us at (973) 972-2251.



Paul Bonitz (left) and Edwin Deitch, MD

## Paul Bonitz's Excellent Surprise

BY MARY ANN LITTELL

In high school, Paul Bonitz dreamed of becoming a forensic scientist. “I saw myself solving crimes based on scientific evidence,” says this aficionado of *CSI*, *Law & Order* and *ER*. During his first year of college (he’s a University of Miami alum with a degree in biochemistry), he shadowed a local medical examiner, then volunteered in the ER “doing paperwork, answering buzzers, and talking to patients. That was an eye-opener,” he says. “I decided I’d rather take care of live people than dead ones.”

Bonitz is now a medical student at NJMS, where he has excelled, impressing all those around him. In May, he was selected as one of three outstanding students who are the first recipients of the Edward J. Ill Excellence in Medicine Scholarship Fund. This award is given annually to distinguished physicians and healthcare leaders in New Jersey. Named for Edward J. Ill, MD, a NJ physician who was a pioneer in promoting continuing education, they are among

the highest honors given in the state’s medical community. This was the first year that scholarship awards were also given to students. All recipients were honored at a banquet in May 2010.

“I was practically knocked off my feet when I won this award,” says Bonitz. He was nominated by James Hill, PhD, interim associate dean, who wrote a letter describing Bonitz’s work ethic, research experience and contributions as a member of the UMDNJ Student Senate. “Dr. Hill nominated me without telling me.”

As an undergraduate, Bonitz considered careers in both research and medicine. When his mother was diagnosed with breast cancer, he began leaning towards research. “I thought I’d go into the lab and discover a cure for breast cancer,” he says. At Miami, he worked for a year in the lab of Kermit Carraway, PhD, and Coralie A. Carraway, PhD, a husband-and-wife team of biochemists researching causes of breast cancer.

“They were my first mentors—very caring and supportive.”

Working in the lab was a great experience, but “there are many wrong turns in research,” remarks Bonitz. “I wasn’t sure I wanted that.”

Once he graduated, he returned home to Hamilton, NJ, and applied to medical schools (including NJMS). To his chagrin, he was not accepted. “That turned out to be the best thing that could have happened to me,” he notes. His mother had been in remission, but her cancer returned. “Home was where I needed to be. I was fortunate to be able to spend this time with her. If I’d been away, I would have regretted it.” His mother died in May 2007.

Bonitz wanted to give medical school another try, but decided to gain additional lab experience first. During the interview process at NJMS, he met Nicholas Ingoglia, PhD, a now-retired professor. He emailed Ingoglia asking if there were any research positions available. Ingoglia immediately put him in touch with Edwin Deitch, MD, chair, Department of Surgery. Bonitz says, “I emailed Dr. Deitch saying, ‘I have a biochemistry degree and a year’s worth of research experience. Can you use me?’”

To his surprise, Deitch emailed back and invited him for an interview, complete with a full-day itinerary. Bonitz spent more than two years working in Deitch’s lab.

“I’d had my caring, nurturing mentors as an undergraduate in Miami,” says Bonitz. “Working with Dr. Deitch was a different experience. He is a brilliant physician, very professional and very tough. He expects a lot of you, but gives back a great deal. He showed me what a true boss should be. He has been so instrumental in my life.”

Bonitz and Deitch developed a close rapport. While it was mostly work, there was some play as well. “We played poker a few times at his house,” laughs Bonitz.

In 2008, Bonitz reapplied to NJMS and this time was accepted. He’s now a third-year student. The period of juggling

*Continued on page 37*

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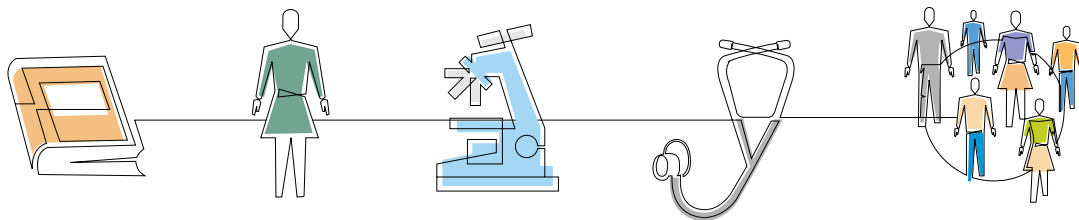
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