

New Jersey Medical School

Volume 7 Number 2 Summer 2009

pulse

University of Medicine and Dentistry of New Jersey



Kendell Sprott and Donna Twisdale

A Match Made in Medicine

OUR BIGGEST LOSERS ■ A NOT-SO-SMALL MIRACLE ■ LIFE-CHANGING PROTEINS

Message from the Dean

I started my tenure as Interim Dean of New Jersey Medical School around the same time members of the Class of 2009 began their medical training here. This past May, the NJMS community proudly saw 163 members of this class graduate and leave to pursue what will undoubtedly be promising careers in their respective fields of practice.

At our Convocation exercises on May 18, NJMS Student Council President Anita Thurakal, MD, and fellow Class of 2009 member Jonathan Flyer, MD, delivered thought-provoking speeches. As I listened to these remarkable graduates talk poignantly about their experiences at NJMS and the lessons learned, I could not help but feel a special connection to this class and an overwhelming sense of pride in its members' accomplishments.

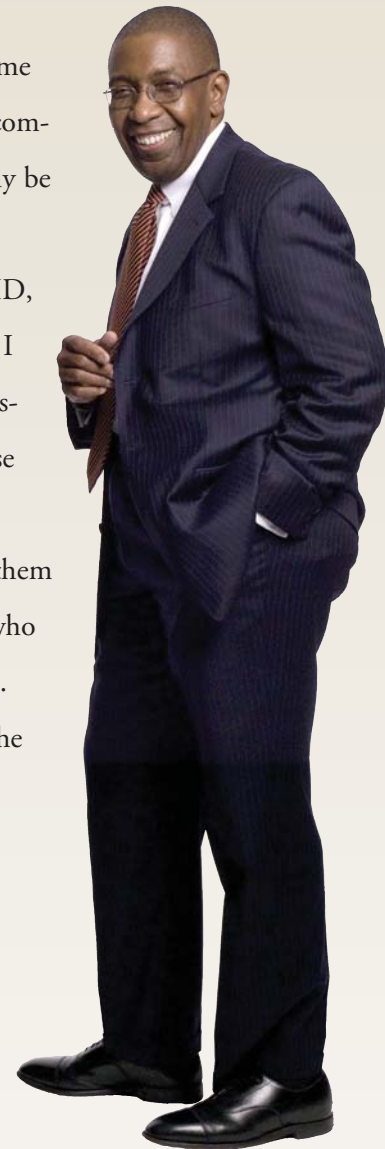
Soon the NJMS community will welcome the Class of 2013 and begin the process of training them for careers in medicine. Like classes before them, the Class of 2013 comprises bright individuals who embody all the characteristics that will make them great doctors and stellar ambassadors of NJMS. Four years from now they, too, will take their rightful places in our respected profession. And as the past four years have proven, that day will be here sooner than we can imagine.

In health,



Robert L. Johnson, MD, FAAP

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



pulse

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UNIVERSITY OF MEDICINE & DENTISTRY OF NEW JERSEY

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Worth a Million



The Envelope, Please...

At Annual Match Day Event, Scores of NJMS Students Learn Their Fates

In today's strained economy, few institutions of higher learning can boast that the vast majority of graduating seniors have jobs waiting after commencement. But that is exactly the case at NJMS where more than 95 percent of fourth-year students, who sought placements through the National Resident Matching Program, earned positions.

Hundreds of students and their loved ones, along with UMDNJ President William F. Owen, Jr., MD, and NJMS Interim Dean Robert L. Johnson, MD, gathered in the Grand Foyer of the Medical Science Building on March 19 to take part in a national event known simply as Match Day. This time-honored tradition is the day when thousands of medical students throughout the U.S. gather at exactly noon Eastern Time at their respective schools to learn where their first jobs as doctors will be.

The noise was deafening as throngs of supporters cheered the students who were called one by one to the center of the room to receive their sealed white envelopes. Some read their letters on the spot for all to see. Others quietly walked off to huddle with families and friends. Every second or so, groups of people erupted in screams of joy. "I'm so excited. I've got to call my parents! I've got to call everyone!" announced Abimbola "Abi" Obafemi before scurrying to share the news that she had matched at the University of Maryland Medical Center in Baltimore for orthopaedic surgery.



Above: Emily Yee, Jason Tholany and Vishal Demla

Left: F. Kennedy Gordon, MD'87 and Jason Smith



Of the 158 students who sought placements, 151 matched with residency programs. Many found themselves linked with such prestigious places as Duke, Harvard, Cornell, University of Chicago and University of California at San Diego, and in highly competitive specialties like neurosurgery, plastic surgery, dermatology, radiation oncology and orthopaedics.

At the festivities, Bettina Scemama De Gialluly recalled a prediction her mother made many years ago about her husband who had been working in the finance industry. "When we got married, my mother said, 'He's not going to have the same job for the rest of his life,'" Scemama De Gialluly said, admitting she was a little taken aback by the comment.

Call it prescience or mother's intuition, but the prediction about her son-in law, Pascal Scemama De Gialluly, Bettina's husband of 16 years, was on the mark. The for-

mer Wall Street wiz matched in anesthesiology at Massachusetts General Hospital, the largest teaching hospital of Harvard Medical School. This 45-year old father of three, and a French native, decided to switch professions after the September 11, 2001 attacks. He was working at Merrill Lynch in New York City as a managing director when he saw the plane, piloted by terrorists, slam into the south tower of the World Trade Center—just minutes after another plane had struck the north tower. This event sent him in pursuit of his childhood dream of becoming a physician.

After volunteering as an EMT, he completed a post-baccalaureate pre-medical program at Rutgers University before coming to NJMS. "I feel fantastic," said Pascal Scemama De Gialluly, president of the NJ Beta Chapter of the Alpha Omega Alpha Medical Honor Society, recipient of the Ruy V. Lourenco, MD, Dean's Achievement Award and the Dr. John Snow Award for Excellence in Anesthesiology. "I feel so

proud of this school and my fellow students.”

Match Day was not just a chance for students to whoop it up, it was also a time to thank people who, as I. Thomas Cohen, MD, associate dean for student affairs, put it, “suffered through the last four years with you.”

“I didn’t do it alone,” acknowledged Jason Smith, flanked by his father and grandfather. “I’m very happy and thankful to the important people who supported me along this rollercoaster.”

Among Smith’s supporters was F. Kennedy Gordon, MD, his mentor and member of the NJMS Class of 1987. “I’ve known Jason since he was in high school,” says Gordon, who has a sports medicine practice in Union, NJ. “I saw him evolve into this wonderful person, who was always very focused. It was my pleasure to give him advice.”

For Smith, who matched in physical medicine and rehabilitation at John F. Kennedy Medical Center in Edison, NJ, Gordon’s guidance influenced him to pursue sports medicine. Smith considers Gordon not only his mentor, but also a family member, referring to him at times as “my uncle.”

Gordon remembers how his own mentor—Interim Dean Johnson—helped him as an undergraduate at Wesleyan University in Middletown, CT. “That connection gave me a lot of strength through college and influenced my decision to come to New Jersey Medical School. I was accepted to other medical schools but chose to come to NJMS,” Gordon says. “I just passed that down to Jason.”

By NJMS tradition, fourth-year students participating in Match Day all put \$1 into a skeleton dressed in scrubs. The last person called to collect an envelope wins the money. This year, Jennifer Hughes, who matched at Weill Cornell Medical Center in pediatrics, won \$125 but started a new tradition and donated the cash to Mercy Ministries, which provides free services to women with eating disorders, drug and alcohol addictions, sexual abuse, depression or unplanned pregnancies. ●

NJMS News by the Numbers

42

Best docs make the 2009 list in *New York* magazine.

3

Grants totaling \$843,997 from Autism Speaks to Nicholas M. Ponzio, PhD, professor, pathology and laboratory medicine, to study the influence of the maternal immune system during pregnancy on the development of autism.

300

Essex County high school students attend the Fifth Annual Teen Forum on HIV/AIDS, sponsored by the Division of Adolescent and Young Adult Medicine (DAYAM).

\$45.8 million

Awarded to NJMS researchers from the National Institutes of Health in 2008.



2 plus 8

Trees and perennials planted on campus this spring by the 2009 Gold Humanism Honor Society scholars.

\$50,000

Raised during the fifth annual Autism Gala at the NJ Performing Arts Center to benefit the Autism Center of NJMS and the UMDNJ–New Jersey Dental School’s Special Care Treatment Center.

\$2,500

Presented to DAYAM’s Youth Development Program by the Essex County Medical Society.

200

High school students attend the “Raising Consciousness: Education, Path to Empowerment” conference sponsored by the NJMS Student National Medical Association and designed to encourage participants to pursue higher education. UMDNJ President William F. Owen, Jr., MD, is the keynote speaker.





Think Trauma

“EVERYONE can sort of imagine getting cancer when they get old, or maybe heart disease. But can you imagine going off to work one morning, getting wrapped by a semi and ending up in a trauma center?” asks David Livingston, MD, chief, Division of Trauma, NJMS, and Director of the New Jersey Trauma Center at UMDNJ-University Hospital.

Probably not. But four times a year, as many as 50 experts meet throughout the state to imagine such personal disasters as well as plan, research, educate, and advocate for trauma programs. They are members of the New Jersey Trauma Council, from the 10 Level 1 and 2 trauma centers in New Jersey. These surgeons, nurse coordinators, registrars, social workers and injury prevention coordinators have worked since the early '90s to solve common problems and push for legislation that will finally fund the trauma system. Currently, Livingston is chair but the position rotates every two years between the three Level 1 directors, and he says, “We are a communal group.” Together, they have published, researched, shared case histories and tackled everything that might affect this leading cause of death in young people. “It’s the most debilitating disease in modern society in terms of cost and loss of productive life. Trauma can happen to anyone at any time,” Livingston says. ●

Blood Donations Go Up

IN recognition of National Blood Donor Month, faculty, staff and students came in droves to donate last January. In all, 156 units were collected, making the two blood drives held on Jan. 21 and 27 rousing successes.

The drives, sponsored by University Hospital, NJMS and UMDNJ-New Jersey Dental School, brought 190 individuals whose donations “almost equaled the 2007 total and represented 75 percent of all the donations in 2008!” reports Lynne Ross, account manager of New Jersey Blood Services.

For individuals like third-year NJMS student Jennifer Gillen, donating was a simple decision. “I’ve been doing this since college. It’s something we can do to help others and it’s easy.”

The fact that a single donation can save as many as three lives is not lost on regular donors like “Gallon Club” member James B. Hogle III, UH’s Executive Director, Hospital Support Services. He has donated more than a gallon of blood over the years and understands the constant need for more. “I’ve been giving blood to help ensure that there is always a ready supply for anyone in need.”

Racing for a Breast Cancer Cure



FOR Betty Patterson-Pearson, breast cancer struck close to home when a co-worker was diagnosed with the disease. She survived, but Patterson-Pearson, an administrative coordinator in University Hospital’s Ambulatory Care Center, never got over the scare. She realized that anyone can get breast cancer. Since then, she has organized teams for a variety of fundraisers for breast cancer and research.

This year—with assistance and cupcakes brought in by Alice Owen, wife of UMDNJ President William F. Owen, Jr., MD—Patterson-Pearson attracted some 100 students, faculty and staff from NJMS and UH

to register for the April 26th Susan G. Komen Race for the Cure. Team Patterson-Pearson, along with five smaller UMDNJ teams, raised more than \$10,000, setting a record as the fifth largest corporate fundraiser. Not bad, considering the recession, observes Patterson-Pearson.

Race day began with more than 10,000 people setting off through Newark’s Branch Brook Park, following pink directional footprints along a 5K trail. The beat of the Rolling Stone’s “Start Me Up” and Coldplay’s “When I Ruled the World” encouraged walkers and runners forward, as did cheerleaders from Montclair High School, a band from Scotch Plains/Fanwood High School and applause. Some wore placards recognizing loved ones who survived—or succumbed—to breast cancer.

Dignitaries participating included President Owen and his wife, Komen founder Nancy Brinker, Essex County Executive Joseph DiVincenzo, Newark Deputy Mayor Margarita Muniz, television personality Steve Aduabato, PhD, and Newark Councilwoman Mildred Crump. ●

The Cold Pack: MedWings Ice Hockey

CALL them “the little team that could.” With inspiration from two medical students, assistance from NJMS faculty, support from the NJMS Student Association and the commitment of 15 players, an inaugural ice hockey team skated onto the ice this past winter to play in the Newark Prudential Center’s AmeriHealth Pavilion’s ice hockey league for nonprofessionals.

From the start, the budding team was all-inclusive with medical students, residents, faculty members and other UMDNJ employees out there competing. Ten games later during that first season, from early January to late March, there would be no rip-roaring headlines with only one win but the team record is something Steven Levison, PhD, NJMS professor, and director of the Laboratory for Regenerative Neurobiology, and co-director of the UMDNJ integrative neuroscience graduate program, dismisses with a hearty laugh. “We don’t like to talk about wins and losses, but about what a great bonding experience and

stress reliever it was,” he says. “It provided an outlet to bring a diverse group of UMDNJ folk together out of school to take out their stress in a healthy environment.”

Student founders and driving forces Mike Klein, playing goalie, and forward Jeremy Whang, class of 2011, welcomed two female players, Christine Orlowicz and Marcie Solondz, also 2011, as well as several skaters from UMDNJ graduate programs, a New Jersey Dental School student and two residents. Along with Levison, Peter Tolias, PhD, NJMS professor, pediatrics, and executive director of the Institute of Genomic Medicine at NJMS, filled out the team’s faculty contingent. “Surprised we have such a distinguished faculty member on our team? Well he’s a Canadian; does that explain it?” jokes Levison, a lifelong player.

Competition was rough and tough. Its first game was against the big and brawny Newark firefighters, who had a long history of playing together. “They were very gentlemanly, cutting our novice team slack, as they beat us 12-3,” recalls Levison.

Now in the midst of a spring/summer season, the team picked up a few more players, including two members of the University Hospital EMS corps and put up its own Facebook page, so fans can keep track of their progress. Check it out. ●



MARK KLEIN, FATHER OF MIKE KLEIN, #20



Vice Dean **MARIA SOTO-GREENE, MD**, was among the Top 20 Leaders in Health and Medicine in the February/March issue of *Latino Leaders* magazine.

WILLIAM HALPERIN, MD, MPH, DRPH, professor and chair, preventive medicine and community health, was named a lifetime National Associate of the Washington, DC-based National Research Council of the National Academies for his outstanding service and ongoing commitment to healthcare.

Interim Dean **ROBERT L. JOHNSON, MD**, received the Delta Award for Community Service from the Essex County Medical Society in May.

VIVIAN BELLOFATTO, PHD, professor, microbiology and molecular genetics, was accepted into the Executive Leadership in Academic Medicine Program at Drexel University College of Medicine.

Receiving an NIH grant is quite a coup, particularly if you’re still working on your graduate degree. Two students in the MD/PhD program at NJMS have accomplished just that. **RIVKA STONE** and **VICTORIA PRINCE**, both fourth-year students, won prestigious NIH F30 fellowships, given to promising researchers in accredited MD/PhD programs. Stone is studying the effect of insulin-like growth factor 1 signaling to understand its role in aging-related disorders. Prince’s work focuses on understanding how chronic alcohol consumption affects the development of alcoholic liver disease.

In March, **PETER WENGER, MD**, associate professor, pediatrics and preventive medicine and community health, received the New Jersey State School Nurses’ 2009 “Award for Distinguished Service and Dedication.”



KUDOS

Interested in the body's endocrine response to stressors, **RYAN CHADHA**, third-year medical student, took his research project from last summer, "The Effects of Perioperative Hyperglycemia on Postoperative Morbidity and Mortality," all the way to the American Society of Anesthesiologists Conference in Orlando, FL, months later. Accompanied by NJMS Anesthesiology Department Chair **ELLISE DELPHIN, MD**, and **CATHY SCHOENBERG**, research coordinator, Chadha treasured the opportunity to present as a Foundation for Anesthesia Research (FAER) fellow.

Cell biology and molecular medicine researchers **DIEGO FRAIDENRAICH, PHD**; **ELIZABETH STILLWELL, PHD**; **JOSEPH VITALE, PHD STUDENT**; **QINGSHI ZHAO, PHD**; **AMANDA BECK, MS**; **JOEL SCHNEIDER, PHD STUDENT**; **GHASSAN YEHIA, PHD**; **FARAH KHADIM**; **GENIE ELSON**; and **ANEELA ALTAF** published a study on the use of mouse embryonic stem cells in treatment of Duchenne muscular dystrophy, an incurable neuromuscular degenerative disease. The research, appearing in *PLoS ONE* on March 11, showed a reversal of the disease in mouse models injected with the stem cells.

STEVEN M. MARCUS, MD, professor, community health and preventive medicine and executive director of the New Jersey Poison Information and Education System, was honored by the Women in Support of the United Way of Essex and West Hudson during the 12th Annual "Night of Miracles Gala, Unmasking Community Heroes."

NICHOLAS M. PONZIO, PHD, and **MARGARETTE BRYAN, MD**, were selected by the NJMS Faculty Organization as Faculty of the Year for their significant contributions in the areas of service, teaching, basic research, clinical enterprise or mentorship.

To Predict Heart Failure

CARDIOLOGISTS at NJMS have observed that a substantial number of African-American cardiac patients with early onset, persistent, high blood pressure progress to congestive heart failure. Looking for new treatments to change this outcome, they turned to genetic researchers and asked: Can you develop a test to identify who is at risk so we can begin aggressive treatment earlier?

NJMS has new technology that allows scientists to take a closer look at a range of protein biomarkers that may predict heart failure. Called Mass Spectrometric Immunoassay (MSIA), it has been used for more than a decade by the pharmaceutical industry but NJMS is the first medical school worldwide to have obtained this technology.

The geneticists so far have developed 12 custom immunoassays, which are based on a



Marvin Schwalb, PhD

NJMS is the first medical school worldwide to have obtained this technology.



list of proteins identified by the cardiologists as potential predictive candidates. Blood samples collected from 105 African-American and Caucasian patients will be analyzed. MSIA can process 96 samples at the same time and turn out results almost immediately.

MSIA, unlike other proteomic technology which determines only how much protein exists, measures changes in the protein structure. "We will have both qualitative and quantitative data," says Marvin Schwalb, PhD, associate director of the Institute for Genomic Medicine and project leader. "We will be able to spot a single amino acid change in a protein after translation, which will help us identify the function of the protein. These variants—biomarkers—will be useful in developing not only predictive diagnostic tests for heart failure, but identifying new targets for drug development."

Working with Schwalb on the one-year pilot study, funded by a \$160,450 grant from the Healthcare Foundation of New Jersey, are Peter Toliás, PhD, executive director of the Institute; and cardiologists Marc Klapholtz, MD, and Edo Kaluski, MD, both NJMS associate professors of medicine. ●



Kim Gardner, MD,
with daughter Jillian

Hats Off to 163 New Doctors!

ON May 20, 163 newly minted NJMS doctors graduated, eager to apply their idealism and knowledge to the practice of medicine.

This class set a record for the largest number of humanism scholars since the Healthcare Foundation Center for Humanism and Medicine at NJMS opened in 2004. “The values of humanism—compassion, empathy, respect and kindness—are what initially drew me to the medical field,” says graduate and scholar Jennifer Koch, MD. (See “Personally Speaking,” page 17.) Like Koch, who matched in psychiatry at Dartmouth, each class member has a story to tell about the path taken to becoming a doctor. For scholar David Jung Seto, MD, that journey began during his psychology and language studies at Princeton, when he wondered how hypnosis might apply to medicine and sought to learn more about complementary and alternative care. As a physiatrist specializing in physical medicine and rehabilitation, Seto hopes to integrate Eastern approaches into the treatment of musculoskeletal pain and chronic diseases.

A dancer since age 5, Cathy Cerullo, MD, was always interested in psychology and science, but a passion for ballet sent her on tour with the American Repertory Ballet Company of Princeton for five years. Hanging up her ballet slippers at 23, she earned a psychology degree first from

Mini-Med Milestone

HAPPY 10th birthday Mini-Medical School! The first year, organizers had to scramble to fill the class. This past year’s two sessions had a total of 410 participants and some traveled from South Jersey every week to join colleagues from Essex, Bergen, Morris, Union and Hudson counties.

The curriculum has always been comprehensive and over time more than 100 topics have been covered by 150 NJMS volunteer faculty. Four subject areas are always on the list: public health, cancer, heart disease and medical ethics.

Not wanting to rest on their laurels, the Mini-Med organizers, led by Jacob Lindenthal, DrPH, PhD, have implemented a community outreach component as well. “The walls of this campus can be daunting to people who live in neighborhoods surrounding UMDNJ, but the desire for knowledge is not bound by socio-economic circumstances,” he says. “We decided to create a program that could be tailored for presentation to specific community audiences.” (See “Paying It Backward,” page 30.)

Pleased with the ongoing success of Mini-Med, Lindenthal continues to dream. “I want to grow a garden of medicinal plants in Prudential Park in downtown Newark where medical students can teach youngsters a proper understanding and healthy respect for the power of therapeutic drugs used correctly.”



Stacey Martindale, MD,
and Marcus Martinez, MD

Columbia and then a master’s in biomedical science from the UMDNJ-Graduate School of Biomedical Science before attending medical school. Now, she is heading for a residency in psychiatry at New York University.

Edward Garay, PhD, MD, celebrated the completion of his medical studies by marrying his fiancée. He says his parents, Peruvian immigrants, stressed the importance of education, hard work and a curious mind. He credits them with sparking his interest in science and inspiring him to earn a PhD in 2007 as part of NJMS’ dual MD/PhD program. A physical medicine and rehabilitation residency at the University of Pittsburgh awaits him.

“It is important that we cure our patients by treating the underlying organic cause of their medical condition, and that we also heal by paying attention to their mental distress,” says scholar Jose Antonio Munoz, MD, who was influenced by the resource-strapped doctors he first observed in his native Cuba. Speaking perhaps for his classmates, he adds: “It is an honor and a privilege for me to carry on this difficult but emotionally rewarding mission.” ●

Section compiled and written by Genevieve Morris, Joni Scanlon and Susan Preston

A CLOSER LOOK AT OUR BIGGEST LOSERS

How They Did It

Four winners happily said goodbye to a total of 53 pounds in just six weeks.

By Kaylyn Kendall Dines

ON the University Hospital Radiology Department team were Robertine (Robie) Payne: 10 pounds; Sandi Smith-Holmes: five pounds; and Gerda Benjamin: eight pounds. And EMS technician James Doran dropped 30 pounds to win an individual prize.

Flanked by her teammates, Smith-Holmes beamed while sashaying to the final weigh-in for The University Hospital Biggest Loser Contest on March 27. She approached the check-in table with outstretched arms and declared, “The winning team is here. Okay, let’s go weigh in.”

Her bold claim foreshadowed fate. Her team won. Smith-Holmes, Benjamin and Payne, all employees in the Outpatient Center of the Department of Radiology, snatched the first-place spot in the competition, named after the popular NBC-TV reality show where contestants shed unwanted pounds using a strict fitness and nutrition regimen.

The premise is the same, but unlike the television show, contestants on the Newark campus were neither sent to a remote location nor assigned personal trainers. Instead, registered dietitians (RDs) from the UH Department of Food and Nutrition Services provided one-on-one consultations just as they do with patients. These dietitians gave competitors customized weight-management tools including dietary recommendations, physical activity and behavior modification tips. Body mass

index (BMI) was calculated using the contestant’s height and weight. BMI helped RDs identify and determine a daily caloric intake that would promote weight loss. Armed with a manual of dos and don’ts, participants began the six-week challenge on February 9.

Prizes were given to the team and the individual who lost the greatest percentage of body fat. Each of the four champions walked away with a huge “Biggest Loser Basket Full of Goodness” chock full of items and edible treats. Kashi cereal, gourmet vinegar, Vitamin water, and

measuring spoons were intended to bolster permanent healthy lifestyle changes. Physical activity books, cookbooks, and calorie counters, all manufactured under by The Biggest Loser brand, were also part of the reward.

According to Janet Reid-Hector, EdD, RD, CNSD, program director of the UH Weight Management Program, practical meal plans, simple recipes and exercise routines were offered. “We really focused on exercise. The majority of the people who came to us were not doing

James Doran



any exercise at all. We now know, through years of research, how much exercise we need in order to prevent chronic diseases. We know how much exercise we need to do to produce maximum weight loss, but most importantly keep it off.”

Participants were instructed to check with their physicians before making strides and to build up endurance slowly. Their fitness goal was to start out with 15 minutes a day and, in a period of one month, progress to one hour. Reid-Hector says, “They could do both aerobic and cardio exercises, any exercise that moves the body through space and also tones muscles. They could walk, they could swim, they could run, or they could dance. Basically, what we told them was exercise is the key to real weight loss, not just losing fluid weight. When you go on a weight-loss diet, you lose about 14 pounds of water weight. The key to losing fat and keeping it off is exercise. That’s the key, that’s the secret. It’s exercise, exercise, exercise. The goal is to get up to, at least, one hour for most days of the week. We encourage blending various exercises into your workout.”

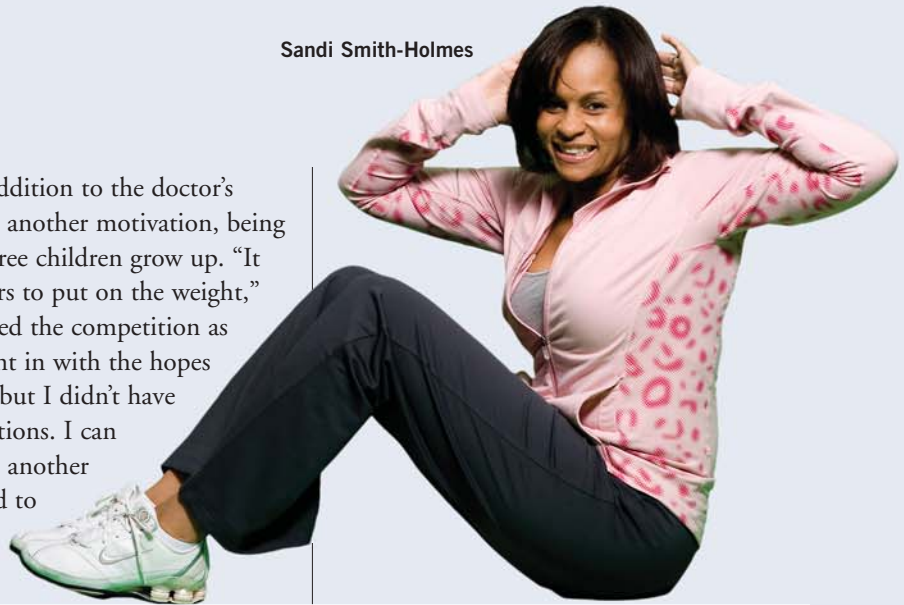
The premise of the contest was the same as the popular NBC-TV reality show where contestants shed unwanted pounds.



Exercise even on weekends. That’s what Payne, a mammography technologist from the winning radiology team, did to eliminate 10 pounds. Her goal is to drop 30 more. She has fierce determination. “My alarm goes off at 4:25 a.m. every week day. No later than 5, I’m downstairs exercising. I have to be finished by 6:10 to head out to work. Exercise is addictive now. My body is used to it,” says the mother of three adult children whose workouts generally last between 30 and 60 minutes.

Walking, elliptical machine, aerobics videos and weight lifting have gotten her

Sandi Smith-Holmes



closer to fitting into some of her unworn clothes. "My goal is to go shopping in my closet before the end of the year," says Payne, eager to wear her size six clothes again. She even monitors her physical consistency by logging the duration and the type of exercise onto a calendar.

Payne and her teammates relied on the buddy system. Have you been exercising? Are you maintaining healthy eating habits? Are you consuming smaller portions? These are questions they began asking one another in an attempt to win. Benjamin, an x-ray technologist, measured her food and decreased her portions. She hasn't started exercising consistently, but she was able to drop eight pounds. Smith-Holmes, a multi-competent technologist, lost five pounds and is half-way to her weight-loss goal.

They had each other and they had those RDs, who were available to field questions. Reid-Hector says, "It's been a tremendous amount of work, but very fulfilling because we're happy for the people who are losing weight. They're on their way to better health. That's our reward."

Wellness, not vanity, was the reason James Doran, an emergency medical technician in the UH Emergency Medical Services Department, jumped at the opportunity to participate in the contest with teammates Nancy Hamstra, the director of EMS, and Anthony Tremarco, EMS coordinator.

For Doran, competing was a pathway to a directive from his physician: drop about 100 pounds. After making significant lifestyle changes, results followed. He lost almost 30 pounds, a victory that resulted in his becoming the competition's individual winner. He says that his doctor expressed concern because being overweight put him at an "increased risk for a heart attack, stroke and the onset of diabetes. All these health ailments could shorten my life

expectancy." In addition to the doctor's order, Doran had another motivation, being alive to see his three children grow up. "It took me four years to put on the weight," said Doran. "I used the competition as my catalyst. I went in with the hopes of losing weight, but I didn't have any great expectations. I can still afford to lose another 60 pounds. I used to smoke and

Seven Steps to Healthful Eating

Elizabeth Nossier, RD, Victoria Watson, MSPH, RD, and Janet Reid-Hector, EdD, RD, CNSD, project coordinators for the Biggest Loser contest, provided contestants with a thick packet of helpful hints. Included were these tips:

- Step 1: Start Strong** Eat breakfast to fuel up with nutrients, vitamins, minerals, fiber.
- Step 2: Pick a Few** Choose more fruits and vegetables.
- Step 3: Mix It Up** Enjoy food from all the groups.
- Step 4: Be Brave** Explore new foods. Use new recipes.
- Step 5: Snack Smart** Pick smart snacks.
- Step 6: Get Moving** Take a walk. Sweep the floor. Dance. Exercise to have more energy.
- Step 7: Count on It** The Food Guide Pyramid is your map to healthful eating.

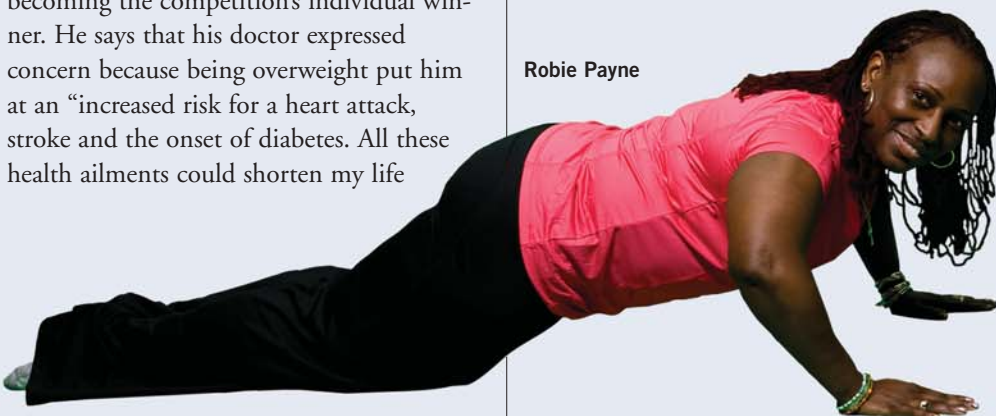
For information, call the Consumer Nutrition Hot Line: 800/366-1655, or visit www.eatright.org.

when I stopped, I went from my optimal weight of 190 pounds to 225. I hovered there for about one year. Then, over the course of three years my weight went up to 297," says Doran, who stands 5 feet 10 inches. "This competition fell into my lap. Timing is everything."

The 38-year-old, whose sights are set on incorporating exercise into his weight-loss program, says, "I was getting short-winded." Although he spends most work days in the office, there are times when he's in an ambulance. "You have to be able to lift people, take care of people and carry people. Stamina is definitely important."

Doran makes breakfast his biggest meal. Lunch and dinner are smaller. No meals after 8 p.m. and he walks to the corner store, instead of driving. He eats more turkey and less red meat. No fried foods for him. He's turned to vegetables, like "zucchini, and things that I would not normally buy." All in an attempt to consume 2,000 calories per day which is recommended for his BMI. Doran says, "Everything in its right place. I don't want to die early." ●

Robie Payne



A CLOSER LOOK AT PAIN MANAGEMENT

From South Pacific Sea Snails

...to spinal cord stimulators, this team will try most anything to take pain away. **By Florence Isaacs**

LAST March, six Swedish physicians attending the World Institute of Pain's Annual Congress in Manhattan took a side trip to Newark. The doctors made the detour to meet Andrew Kaufman, MD, director of the NJMS-University Hospital Comprehensive Pain Management Center, so they could learn about a procedure that is changing lives in extreme cases of chronic pain. Pumps to infuse a novel drug,

Ziconitide (Prialt), are being implanted into spinal cords under Kaufman's direction. And it isn't just Swedish pain experts who are intrigued. This director recently lectured to other pain professionals on the procedure at Weill-Cornell Medical Center and at Beth Israel Hospital in Boston.

"Prialt has been around for a long time, but it's becoming more widely used now, and I'm a proponent," says Kaufman, an NJMS

assistant professor of anesthesiology who was involved in some of the original clinical trials on Prialt. "This drug was developed from a *Conus Magnus* snail found in the South Pacific, but we never used it before because of dosing and side effect difficulties. Now the dosing has been worked out and the side effects are minimized. Prialt is making a huge difference for patients when nothing else works, such as those with severe neuropathic pain from nerve damage."

The Center assesses and evaluates complex cases referred by physicians from all over. A vast majority of patients have back or neck issues but chronic pain can be caused by cancer, arthritis, trauma, shingles, diabetic neuropathy and many other conditions. Conservative needle approaches can help. For example, an epidural steroid injection will calm an affected area. Or, radiofrequency ablation to heat or "burn" certain nerves has the potential to provide months of, and sometimes, permanent relief. Only the severest cases call for the implanted pump with the Prialt or a spinal cord stimulator, which uses technology similar to a pacemaker to change the perception of pain.

"In contrast to many other pain centers and doctors in the community, we do more than just give injections," Kaufman explains. "We like to do procedures—don't get me wrong. They're fun. But they're just a component of what we do. Acting like a primary care pain doctor, we will manage the patient's care in addition to the medical work. For example, we'll decide whether someone needs to be referred to a rheumatologist or neurologist."

In addition to Kaufman, the Center is staffed by Naum Shaparin, MD'03, NJMS assistant professor, anesthesiology, who is the attending physician, and nurse practitioner Elizabeth Rosenbaum, RN, MA, APN-C. Rosenbaum also assists in homeopathic treatments and patient counseling. Candidates for invasive procedures such as a spinal cord stimulator or pump insertion require psychological profiling and evaluation by a psychologist. If there are signs of severe anxiety or depression that might



Naum Shaparin, MD, and
Andrew Kaufman, MD

interfere with a successful outcome, those issues are addressed first.

“If we’re putting in a permanent piece of hardware that must be maintained for the rest of the person’s life, we need to be absolutely sure that he or she is psychologically prepared,” Kaufman explains. The newer spinal cord stimulators can last up to ten years, but patients must “re-charge” themselves approximately every two weeks. Pump recipients require medication refills, which involve accessing the pump in their bodies using a sterile technique every 30 to 45 days.

Although the Center does prescribe oral medications, including opioids, the staff tries to use them as infrequently as possible. “It isn’t that we are opposed to medications,” Kaufman says. It’s just that there are concerns about where that patient will be in five or ten years and what side effects or interactions will result including the possibility of drug dependency. For instance, he wonders about the benefit of placing “a 30-year-old on meds, saying there is nothing else to do for pain which gives this patient no end point” to the drug use.

Meanwhile, “With an injection and physical therapy, and maybe a topical preparation, we can avoid or reduce that need for pills,” adds Shaparin. “We do some medication management but it’s mostly using antidepressants and anticonvulsants that have been shown to work on chronic pain, rather than opiates.” For example, Lyrica and Cymbalta are two of the newest drugs for neuropathic pain as well as fibromyalgia.

For Vicki Benedetto, 47, the ordeal began at the supermarket where she worked as a checker. As she reached across the cash register to pull a 25 lb. bag of Kibbles ‘n Bits, this single mother of four heard a “pop” in her back, followed by a flash of pain down

her left leg. It was the start of a 20-year struggle with excruciating pain that permanently disabled her and kept her housebound. Despite the implantation of a spinal cord stimulator in 2004, she was taking 27 pills a day for pain control.

“I couldn’t drive and needed a walker or cane to go half a block. I felt the pills were

which I couldn’t have taken care of before. I can walk him out in the fresh air. I feel like a young woman,” she says.

Benedetto’s pump is implanted in the left side of her abdomen. Because it protrudes, she can’t wear tight clothes and, as she says, “The pump was hard to get used to. I’ll never be cured but hey, I feel better. I have a better quality of life.”

Because pain management is a relatively new specialty, the average physician may not be aware of all the Center can offer. The majority of referrals come from neurosurgeons or orthopaedists. Kaufman and the Pain Center work closely with the referring physicians to optimize treatment outcomes.

Another challenge is to educate healthcare providers. “There isn’t enough pain management instruction at medical and nursing schools,” says Kaufman. “We fight this all the time. Physicians graduate without understanding true pain mechanisms or how to treat pain. There is also a fear of prescribing potentially addictive medications. Part of our role here is to change that.” Rosenbaum is involved with the education of undergraduate nursing students and nurse practitioners while Shaparin and Kaufman are teaching medical students and residents, hoping to create a new breed of doctor more comfortable with pain treatment and management. Kaufman would like to have patients sent to the Center for consultation because their physicians “need the pain experts’ help.”

People have always had pain, but in recent years the media has educated the public to advances in pain management. Patients have become savvy enough to ask a doctor about pain relief and it certainly helps to have a celebrity promote this awareness. Comedian Jerry Lewis talked about his own chronic pain, which dogged him for 37 years—until an implanted pump and spinal cord stimulator gave him back his life. Says Kaufman, “People come in and say, ‘I want what Jerry got.’” ●

Sea Snail Secrets

The *Conus Magnus*, a sea snail commonly found in the South Pacific, packs a powerful neuro-toxic punch. What’s the sea snail’s secret? *Conus* relies on potent venom that has peptides which act like calcium channel inhibitors and interfere with neurotransmitters to immobilize and paralyze passing prey. In humans, a synthetic version of this toxin was developed into a potent pain killer, Prialt, and approved by the Food and Drug Administration in 2004. This drug is so powerful that it can only be administered directly into the fluid surrounding the spinal canal because using any kind of systemic delivery could damage other organs.



killing me,” says Benedetto. When Kaufman suggested trying the pump and Prialt a year ago, she jumped at the chance. First she had a one day trial where the drug was injected under fluoroscopic guidance into the cerebral spinal fluid (CSF) in her lumbar spine area. This technique is similar to a spinal tap except that medication is injected without removing CSF. The pain relief proved to be dramatic so a neurosurgeon implanted the pump the next day. The procedure has changed Benedetto’s life.

“I used my cane only once this year—on an icy day. Now I can drive to a doctor’s appointment, pick up one of my sons from his college class, and go to the store if I need bread. I’m down to nine pills a day, and one is for cholesterol. I even have a puppy,

NJMS PEOPLE DO YOU KNOW?



DIANE KAUFMAN

Exploring the Power of Creativity

A psychiatrist who threw herself into poetry and brought along her patients and students

By Lisa Jacobs

THE idea that the Greek god Apollo was responsible for both medicine and poetry may seem odd to our modern consciousness, but not for Diane Kaufman, MD, NJMS assistant professor, psychiatry and pediatrics, and a UMDNJ–University Behavioral HealthCare (UBHC) senior child psychiatrist since 1986. Kaufman often relies on Apollo when lecturing on the role creativity can play in a comprehensive medical treatment, to highlight what she sees as a natural relationship between two seemingly disparate fields aimed at wellness and healing. “I think the repertoire of a mental health provider is greatly enhanced by not excluding creativity. Of course we have to focus on pathology, but we should also focus on creativity,” she explains.

Kaufman has been recognized for her work as a physician who integrates the creative process into psychiatric treatment and as a teacher for educating students about the role of humanism and art in medicine. Jacob Lindenthal, MD, NJMS professor, psychiatry, describes her as “a role model for those aspiring to be physicians as well as for her colleagues.” She “approaches the ideal synthesis of humanism and medicine,” he says, and was the recipient of the Healthcare Foundation of New Jersey’s Leonard Tow Humanism in Medicine Award. Kaufman has served on the advisory boards of the Arts and Prevention Institute, the Barat Foundation, Good Grief, and Creative Heartwork, chaired the Newark Chapter of the National Campaign to Stop Violence and is the liaison for the New Jersey Council for the Humanities’ Literature and Medicine Program. Most recently, she presented “Poetry and the Evocation of Empathy” at the Creativity and Madness Conference in Spain. On April 29, UMDNJ celebrated its first annual Poetry in Medicine Day.

Kaufman’s interest in combining art and medicine is as old as her childhood goal to become a “medical doctor or medical drawer,” the latter profession she imagined to bridge the gap between the scientifically and medically oriented side of her family members and their longstanding interest in the arts. Growing up, Kaufman used poetry to cope and for self expression. It’s a skill that she tapped into years later when faced with difficult personal circumstances. “Going through emotional trials, I would write my feelings, and they would come out as a poem,” she says.

In 1997, Kaufman began volunteering, leading creativity and writing workshops at Integrity House, a residential drug rehabilitation center in Newark. This experience led her to author a treatment workbook, *Cracking Up and Back Again: Transformation Through Poetry*. Then, an intern invited her to a poetry therapy training seminar in Washington, DC, introducing her to the field of poetry therapy, which she didn’t know existed. “It was just amazing, she

swung the door wide open for me,” Kaufman recalls. “When I learned about poetry therapy, I threw myself right in, and happily I haven’t emerged since.”

Shortly thereafter, Kaufman authored a poem, “America’s Children are Singing,” inspired by her work as the medical director of the pre-school mental health service at UBHC, where most children had been sexually or physically abused. “Very moved by

Poetic Medicine

There’s always a big black pot
Simmering
Bubbling
Boiling over with troubles
A big wooden spoon
Hands spellbound
Can’t release the grip
Stirring wildly
Stirring non-stop
And it’s always darkest night
The brew gets thicker and thicker
As more troubles keep piling in
You ask yourself, “Oh! When will it
ever end?”
A whisper replies, “Pour out the pot
and start all over again!”

Diane Kaufman, MD

the pain of their experiences,” Kaufman went into a “meditative poetic trance” and wrote the poem spontaneously. When she got a card advertising the New Jersey Share Our Strength Literary Fundraiser, she felt she had found a perfect venue to share her words. So impressed were the event organizers with the poem after she read it to them on the phone, it was selected as the Benediction Poem for the event and the reading earned her a “high five” from the Pulitzer Prize winning poet Galway Kinnell.

Kaufman brought her newfound poetry power back to UBHC and collaborated with a psychology intern to create “The Mighty

Pens,” a writing group for children to help them see writing as a source of strength more powerful than fighting. “As psychiatrists, we value talk, but why do we minimize writing? We are more thoughtful, insightful, and accurate in our writing,” she explains. She also started the UBHC Arts and Mental Health Initiative, working with psychology interns, psychiatry fellows, and the UBHC Child and Adolescent unit.

Kaufman’s work sent her to Washington, DC, and the U.S. Senate when Newark children were being honored by the National Coalition to Stop Violence “Do The Write Thing Challenge,” a project which encouraged youth to understand violence in their communities through writing. She has collaborated with visual artist Paul Anderson on a poster poem about child abuse, and with music therapist Karen Goodman of Montclair State University, whose students help the Integrity House women integrate music into their poetry.

Kaufman’s belief in the powerful role that creativity can play in treatment is unshakable. Her office is filled with art work and musical instruments. Patients are encouraged to touch and try. Through art and creativity, “You get to know someone on a more human to human level. You’re connecting on beauty or amazement, an awestruck level. I find that it enriches my life personally and interpersonally.”

Besides brainstorming a new elective in healing arts in medicine for NJMS students, she will also deliver a presentation at the 8th Global Conference on Health, Illness, and Disease at the University of Oxford. Always searching for ways to encourage other physicians to use creativity in comprehensive treatment, she says, “Knowledge about the expressive arts should be a resource for practitioners, and for our patients. Our vision should widen,” she believes. “The god of medicine in Greek mythology, Apollo, is also the god of poetry. We saw that connection in antiquity, but it’s been split apart... we should heal that rift.” ●

Interested in arts therapy? Email Kaufman at kaufmadi@umdnj.edu.

NJMS PEOPLE DO YOU KNOW?



KENNETH SWAN

Combat Surgeon **Extraordinaire**

Meet the expert who wrote “the” book on trauma surgery.

By Susan Preston

IN the middle of the interview, the surgeon excused himself to pick up a ringing phone. For the next five minutes, he listened to a woman whose son, his patient, had been released from University Hospital several days earlier.

The surgeon, Kenneth G. Swan, MD, COL, MC, USAR (RET), has a lifetime of awards for contributions to surgery and trauma care. And in May, he received another one: the prestigious 2009 Edward J. Ill Physician's Award.

But during that brief phone conversation, he was first and foremost a caring physician. Kind and knowledgeable, he joked with this anxious mother about all the messages she had left on his home phone. He had been out of town. Swan, to the bafflement of his colleagues, gives patients both his office and home numbers.

A professor of surgery at NJMS since 1976, Swan began the Level I Trauma services at University Hospital in 1980. He also established the American College of

Surgeons Advanced Trauma Life Support Programs in New Jersey and has been course director and on the national faculty since 1980.

Trauma surgery, he explains, developed into a specialty as a result of armed conflict. “During the Vietnam War, the Army implemented standards that reduced the amount of time it took helicopter pilots to transport wounded personnel from battlefield to field hospital to an average of 30 minutes. Those advances in aeromedical evacuation ultimately led to the establishment of trauma centers.”

Asked to talk about his life, Swan quickly changes the conversation to his oldest brother, Roy—mentor, hero, colleague, collaborator, and friend. The youngest of five children, Swan recalls, “Growing up, Roy was tougher than my dad.” In fact, he chose surgery because “it was too tough to compete with my brother, an internist and physiologist.” His brother served in the U.S. Navy during World War II, so when Swan enlisted in 1960 while still a medical student, he chose the U.S. Army. He finished his residency and then entered the U.S. Army Medical Corps as a captain in 1968.

His first orders were for the Edgewood Arsenal in Maryland where he was assigned to do research on wound ballistics. But Swan wanted surgical experience in the battlefield because he had not had much practice in trauma surgery during his residency. He requested and was reassigned to the Walter Reed Army Institute of Research in Washington, DC. He was to be deployed as part of its surgical research team to Saigon. That wasn't close enough to the action for him and so, again at his request, he was reassigned, this time to the 71st Field Evacuation Hospital in the central highlands in South Vietnam.

This project unleashed what became a lifelong passion. For the next 12 months, as well as performing critical surgery, he took pictures of battlefield wounds. On his second mission as a surgeon, he was accompanied by photographers and as a team, Swan and the group compiled an extensive photo

library of combat wounds to help teach trauma surgeons.

On his third tour, the U.S. Agency for International Development suggested that he bring his family with him and so his wife Betsy, a nurse and former Pan Am flight attendant who had worked the West Coast-Vietnam route for a year, and his daughter Stephanie, seven-years-old at that time, accompanied him to South Vietnam. “It was overwhelming,” he recalls. “The fighting was so fierce, the surgery team was working seven days a week the whole time we were there.”

Swan transferred to active reserve status in 1973, and was promoted to colonel in 1977, assuming command of the 322nd General Hospital, USAR, Picatinny Arsenal for five years. But in 1991, he returned to active duty for Operation Desert Storm.

“I attribute some of my interest in wound ballistics to the fact that my father was a sales manager for Remington Arms. We had guns all over the house because he had to demonstrate them for customers.” Swan and his brother also wrote a highly regarded book on the topic in 1981 and updated it in 1989.

Family collaborations come naturally. In March 2009, *The Journal of TRAUMA Injury, Infection, and Critical Care* published a paper on the proper use of tourniquets which was authored by Swan; his wife; two daughters, Deborah, a kindergarten teacher, and Stephanie, a nurse; and son, Kenneth, a UMDNJ orthopaedic surgeon. “The project resulted from Debbie asking about how to apply a tourniquet properly,” Swan says. “In fact, it’s a very controversial subject among emergency medical personnel. The paper provides treatment guidelines.”

He holds the Legion of Merit, the Bronze Star with two Oak Clusters, the Air Medal and also has badges as a Combat Medic, Master Parachutist, Flight Surgeon, and is HALO Air Assault and Special Force qualified. As Paul J. Hirsch, MD, chair of the Edward J. Ill Excellence in Medicine Foundation, said when he announced this newest award, “Dr. Swan is a true hero.” ●

NAGASWAMI VASAN

Born to Teach? Well, Maybe or Maybe Not

What you may not know about a beloved anatomy professor who’s been here for more than three decades

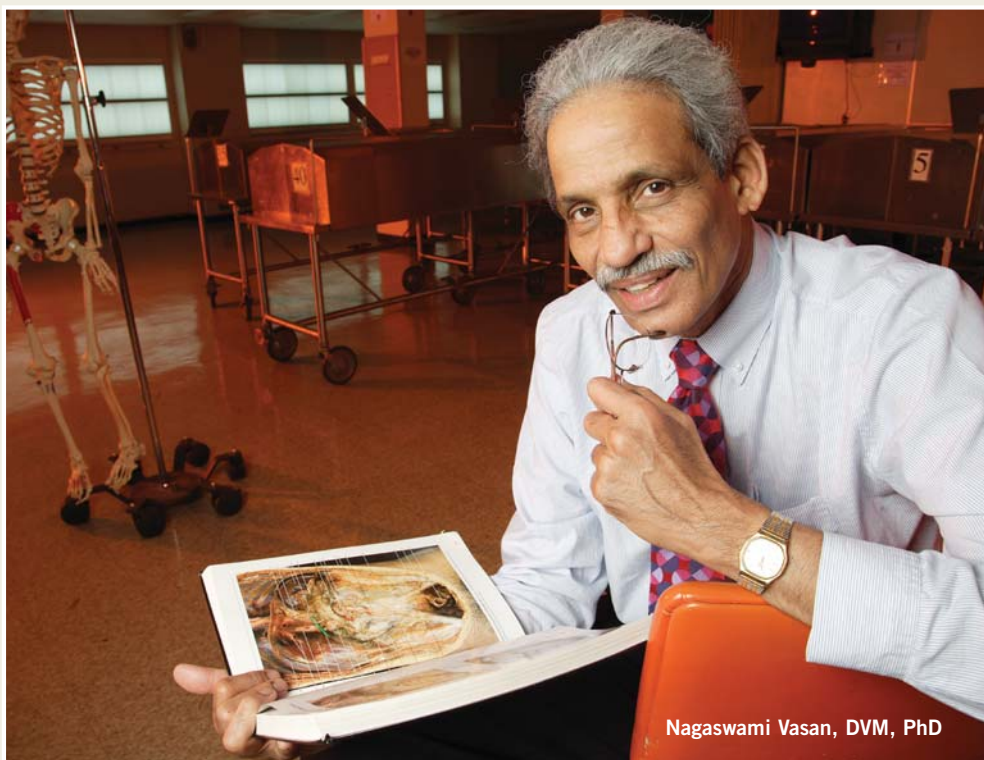
By Eve Jacobs

TEACHING is the every-morning challenge wooing anatomy professor Nagaswami Vasan to embark on his workday with incredible eagerness—even after 32 years, even on Saturdays and Sundays. Routine is a concept he doesn’t “buy.”

Historically, human anatomy is the course most likely to trip-up first-year medical students with its vast amounts of information to memorize plus the emotional wallop of staring death in the face, literally, before taking scalpel to flesh to achieve mastery in dis-

section. But for this professor, each student’s classroom experience is significant, each student’s success with the coursework paramount. You might just think this man was born to teach.

Perhaps that’s the case, or maybe not. Veterinary medicine was Vasan’s first calling, and he earned his degree from the University of Madras in India in 1962. The challenge, he explains, was developing a sixth sense immediately—not 10 years—down the road after gaining experience—



Nagaswami Vasan, DVM, PhD

NJMS PEOPLE DO YOU KNOW?

because animals, obviously, can't communicate their aches and pains. Vasan discovered that he likes challenges.

Born and raised in the city of Madras, he decided to learn about life in India's villages by working there for two years after graduation. What he encountered was a way of life far different from the "privileged" one he knew. It was a world where most women received no healthcare during pregnancy, delivery, or after, and many died in their teens and twenties. "Women were not

nutritional sciences, then a PhD in neurochemistry, studying in a "world famous lab. I learned to like this subject because it was the opportunity of a lifetime," he explains. He had a research career in mind, a suitable challenge, he thought. But life had other pursuits in store for him.

In 1971, he left India, headed for a postdoc at the University of Pennsylvania. Laboratory research was interesting, but the teaching responsibilities assigned to him during his fellowship were even more satisfying.

Since arriving at NJMS in 1977, Vasan has shepherded thousands of students through the challenges of that first year initiation course, steadying not only their hands at the dissection tables, but also their spirits as many face death for the first time. He has invested far more than the required hours, but also gives his heart and soul to help students over those first hurdles on their way to filling out the white coats that symbolize their future responsibilities. He has worked hard to earn his reputation as a consummate teacher. Students are wowed by his kindness and humility, his respect for them coupled with a "sixth sense" for their needs, and a never-flagging enthusiasm for his work. None of these go unnoticed. Beyond all that, what keeps him moving is his love of challenge or, as he says, continuously raising the bar for himself to teach this difficult course more efficiently and to excite his students about learning.

It's a sad reality that a person's achievements often go unrecognized in his lifetime. But, happily this is not the case for Vasan. He has been lauded by his students with Golden Apples by the barrel, by his fellow teachers with being named to the inaugural group of UMDNJ Master Educators in 2000, serving as the Master Educators Guild's president in 2003–2004, and with national recognition as a Harvard Macy faculty scholar for four years running, an honor that brings additional teaching responsibilities, but no pay. On May 6, the state where he has practiced his teaching arts for decades awarded him the Edward J. Ill Outstanding Medical Educator Award.

And because we know that this is no culmination of his life's work, but one more step in his striving to do it better, we are not surprised that he uses the opportunity to give us some of his hard-earned wisdom: "Always continue to gather knowledge," he says, "but if you don't know something, say so. Don't fake it. Tell the student that you don't know the answer. Not only will this be an opportunity for you to learn something new, but, more important, you will have earned that student's trust forever." ●

Vasan was called upon to deliver babies of "untouchables" and to settle land and family disputes under a large tree when a full moon appeared. **It never occurred to him to refuse.**

inclined to see male doctors for gynecological problems and there were very few women trained in medicine," he explains. It was also a world where "untouchables" were too poor to access any medical or legal expertise.

As the most highly educated person in the village where he settled—and one whose heart has never allowed him to turn away from anyone asking for his help—Vasan was called upon to deliver three babies of "untouchables" and also to settle land and family disputes under a large tree once monthly when a full moon appeared in the sky. It never occurred to him to refuse. Two of the mothers showed their gratitude by naming their children after Vasan and his mother, a complicated process involving gaining permission from the village chief to use the names of members of the upper class. Those village memories are still intact and set the stage for what has been a life of challenge and service he could not have imagined in his 20s.

After two years, Vasan returned to school, first to earn a Master's degree in veterinary

And Vasan discovered he was good at teaching. The enthusiastic feedback of his students gave him incredible satisfaction, and he began to see the classroom as a place he could continue to grow and make a difference.

After completing his one-year postdoc and two-year fellowship, Vasan became an instructor at the school, teaching anatomy to medical students for two years. "I was really excited about that assignment," he says. "Students learn from donated bodies in this course. This is an incredible gift—a gift given only to medical students. I become emotional when I talk about this with the students. You can teach a lot about medicine, and also about life, with cadaver donation as the basis.

"When someone has reached the age of 75 or 80, that person has probably had several surgeries, maybe a heart attack. I use this as an opportunity to talk about hysterectomy, gastric bypass and heart surgery," he continues. "If a cadaver has one kidney, I talk about organ donation. I can show the students how much physicians do to enhance the quality of human life."

PAULO LIZANO

Planting Seeds

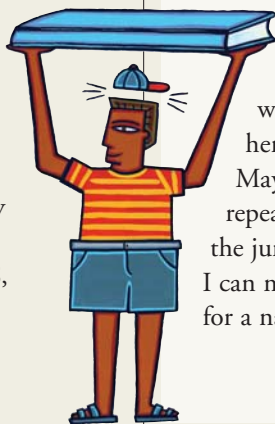
As a boy, Paulo Lizano was curious and showed a passion for science, but he never imagined having a career in medicine or research. Then, in his junior year of high school, Lizano's chemistry teacher nominated him for a Harlem Children Society program pairing motivated teens from poor communities with leading scientists, engineers and doctors. Lizano is now in the middle of a seven-year MD/PhD dual degree at NJMS and GSBS.

This past January, he started tutoring sessions for kids in grades five through 12, with the help of New Jersey Scholars, Educators, Excellence, Dedication, Success (NJ SEEDS), an academic program that helps high-achieving, low-income youth. Lizano's Union Hill High School classmate Yanett Salazar, is actually associate director of alumni relations for NJ SEEDS now. On Tuesdays and Thursdays, from 4 to 6 p.m., more than 30 NJMS and GSBS volunteers were paired with young NJ SEEDS scholars.

Lizano also collaborated with his advisor Nicholas Ingoglia, PhD, professor, pharmacology, physiology and neurosciences, and Gina Charles, a GSBS student. In the first week, Alex Sepulveda, 16, of Hillside, got help with pre-calculus. "I'm in NJ SEEDS because I'm trying to get good grades for a scholarship." On the same afternoon, Devika Patel, 14, of Parsippany, was tutored in chemistry and geometry. The freshman has her eyes set on the Massachusetts Institute of Technology (MIT). Hamid Bagce, a second year MD/PhD student, knows the impact his contribution could have. He's actually a NJ SEEDS alum. "This is a great opportunity to give back," he says.

For information on NJ SEEDS, contact Sarah Miretti at 973-642-6422, ext. 241, or email smiretti@njseeds.org.

— ZENAIDA MENDEZ



PERSONALLY SPEAKING

This new column will feature essays that come straight from the heart, written by members of our NJMS community.

On the first day of an End of Life elective with the palliative care team at University Hospital, Jennifer Koch, MD, NJMS class of 2009, met Elizabeth*. At 70, this woman was living a parent's worst nightmare: watching her terminally ill daughter succumb to liver disease.

For Koch, it was a bittersweet time. Just six weeks prior to meeting Elizabeth, on Christmas Day, she had witnessed her wife, Kate Cochrane, give birth to their daughter, Augusta Jane. But Elizabeth's plight served as a reminder of how precious life is and how fleeting it can be. Just four days after Koch completed the two-week elective, Elizabeth's daughter died. Recalling a conversation the team had with Elizabeth, during which the grieving mother said, "Don't take motherhood lightly," Koch wrote the following essay.



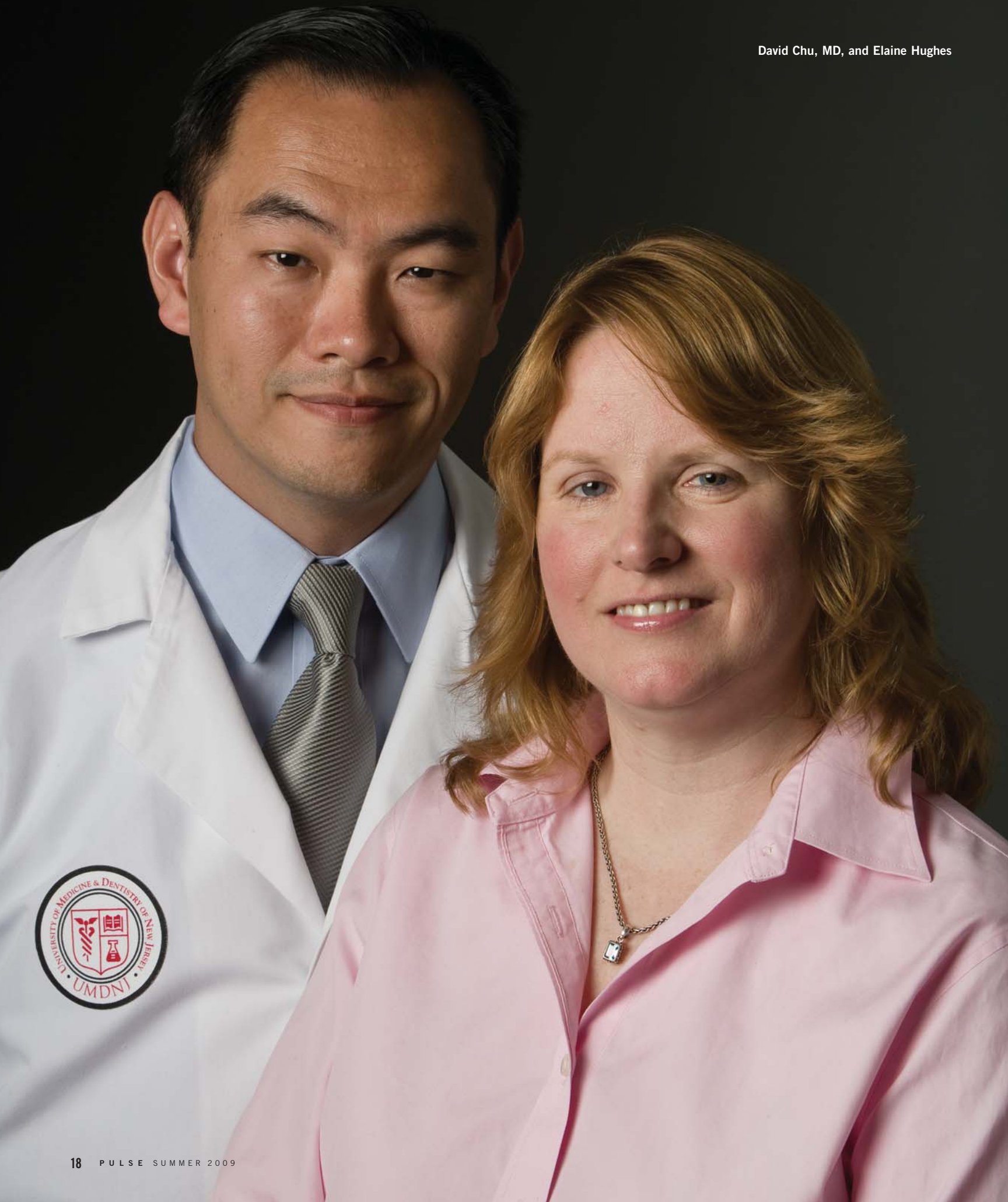
Don't Take Motherhood Lightly

"DON'T take motherhood lightly," she said in the meeting when we told her that her daughter is dying. We watched as the "d" word worked its way into her consciousness. The first time the word was uttered it bounced off her impenetrable shell as she spoke of a cure. The word crashed toward the floor. Like a child's game of keep the balloon afloat, we uttered the word again just as it was about to hit the ground. The word flew back up into the circle between us. "Dying." This time silence. The dying balloon floated over Elizabeth's head. She did not bat at it. She would not keep it afloat, she could not hit it away again. It floated slowly down from the ceiling. The word travelled past her head, her heart, her healthy liver, and was just about to settle at her toes when a third time, the word was uttered. "Dying." Again the balloon flew off of the ground with new life, old life, dying life. Elizabeth did not want to catch it. She did not want the word to stick. But, as it flew towards her face, her hands instinctively opened. And now, as though charged with static, the balloon would not leave her. It stuck to her sweater and she could not shake it off.

She stared at the dying balloon not wanting to believe it was real. Maybe she is dreaming of the balloon. Maybe her daughter is not dying. Maybe her liver is fine. Maybe her skin is a soft peach and not the alien color of a yellow-green glow stick. Maybe she is 10 not 40. Maybe her hair is in pigtails and she is wearing a bright colored jumper not a gray hospital gown. Maybe when she loses her place it is because she is trying to remember her next line in the school play. Maybe she'll grow up to be an actress, a schoolteacher, an engineer. Maybe we'll repeat this scene 30 years from now and her own 10-year-old will be hanging from the jungle gym. Maybe I can watch my granddaughter cross the monkey bars. Maybe I can make her cookies and read her stories. Maybe I can tuck my granddaughter in for a nap instead of tucking my daughter in forever. Maybe. — JENNIFER KOCH

** Elizabeth is not her real name.*

David Chu, MD, and Elaine Hughes



E
L A I N E
H U G H E S'
N O T - S O - S M A L L
M I R A C L E

An accident nearly 30 years ago left her blind in one eye. It took a series of unexpected, fortunate coincidences to change that fate.

BY MARYANN BRINLEY

Elaine Hughes doesn't want to believe in miraculous serendipity but a startling chain of events which began more than 30 years ago makes her pause in amazed gratitude. "I'm not usually that religious but can all this have happened because of just weird coincidence?" Hughes is a 44-year-old computer expert who loves her job in the NJMS Technology Support Services Department. "To be able to help all kinds of people in the medical school keep their computers up and running is great. I'm lucky because I get to talk to the doctors as peers."

In fact, it was on just such an occasion in 2004 while she was working on a malfunctioning computer in the Institute of Ophthalmology and Visual Science (IOVS) that Hughes found the answer to the personal catastrophe that had started three decades earlier. "I was seven years old and had been playing with a pencil and a rubber band like a slingshot," she explains. "My father was nearby and thought about stopping me." But in an instant, the pencil shot into her left eye, shattering the lens and causing what was deemed nearly irreparable damage. "My dad regretted his inaction for the rest of his life. He used to say all the time, 'If I could only go back and do that one thing: stop you.'"

When he died at age 75 in 2002 from a stroke, he even willed his eyes and corneas to science, hoping that they might somehow benefit his daughter. "My father was a truly optimistic person, who would tell me, 'Elaine, I just don't think you should give up. I really don't.' He was very honorable and sweet and I guess, in a sense, after his death, when his own eyes weren't going to benefit me, he figured out another way to get me help."

Immediately following the accident, her parents rushed her to a hospital in Brooklyn, where the family lived. One of seven children, she explains, "There was so much trauma to the eye that one of the first doctors suggested it be taken out completely." Physicians

believed that sympathetic ophthalmia might rob Hughes of the sight in her other eye. In rare cases, tissue from a damaged eye circulating in the bloodstream can set off an inflammatory, autoimmune reaction in which the body starts attacking similar but healthy material in the uninjured eye. However, another expert at the hospital bravely argued to save her eye and to adopt a wait-and-see approach. He also performed surgery to remove some lens fragments and told her parents to take her home and "just let it heal."

It wasn't until she was a teenager that Hughes actually and fully realized that she would probably be blind in the eye forever. "I could see light, just day or night, but I had thought it could be fixed eventually. I was about 12 when I asked the doctor, 'When is this going to be resolved?' And I remember being told, 'Never. I'm sorry. It can't be fixed.' You can imagine how shocked and disheartened I was."

Growing up and going through school, Hughes describes herself as "self-conscious. I used to wear my hair covering the eye all the time. I was clumsy and would knock over things on my left side. I'd run into walls and it would be embarrassing. I had very little depth perception."

On numerous doctors' visits, throughout her lifetime, Hughes was informed that there was nothing that could be done. "Leave it alone," she would hear. "It's not doing anything. It's not hurting you." There was just too much scar tissue on the retina. Meanwhile, it would take her parents more than ten years to pay off the original surgical bill. "There was just a lot of guilt for everyone about the entire experience," she recalls.

In 2003, this mother of two daughters—Sara, now 24, and Jane, 21—was working for a computer software firm when she was suddenly laid off on the first anniversary of her father's death. It was not a good day at all. But her father's dream was far from over. Robert Luciano, a friend and co-worker whose own father had died on the same date, though a different year, vowed to make things right for her. Luciano couldn't believe how unfair the lay-off was, especially on that particularly sad day. So he called his wife Linda, who was employed at NJMS at the time, and asked about job openings. "You'll love it here," she was told. Little did Hughes know that something even more loving would happen because of her new position.

In the summer of 2004, she developed a sty in her right eye. On assignment to tend to a computer at IOVS, Hughes asked the office manager, Barbara Churchill, to recommend a physician who could

While other doctors had told this patient to leave the eye alone, **the case was "a challenge for me," Chu says.** "There were enough clues that she might possibly regain some sort of reasonable vision."

take care of it. "Go see Dr. Chu," Churchill suggested.

"Immediately, I walked over to Dr. Chu's office and he could see me right away," she says. Then, Assistant Professor David Chu, MD, asked her, "What's the story with that other eye?"

"It was obvious to anyone looking at her that the left eye was not functioning," he recalls, as he pulls out her chart to refresh his memory about the details. Not having been able to see with the eye for so many years, the muscles had weakened, letting the eye drift out. "When the brain has no intention of keeping both eyes targeting one spot, this happens." He could even see the scar from where the pencil had gone in.

"Want to do something about it?" he asked her point blank. "I think I can fix it." She was stunned. Within minutes after a test that day to determine if she was a surgical candidate, more good news arrived. "I

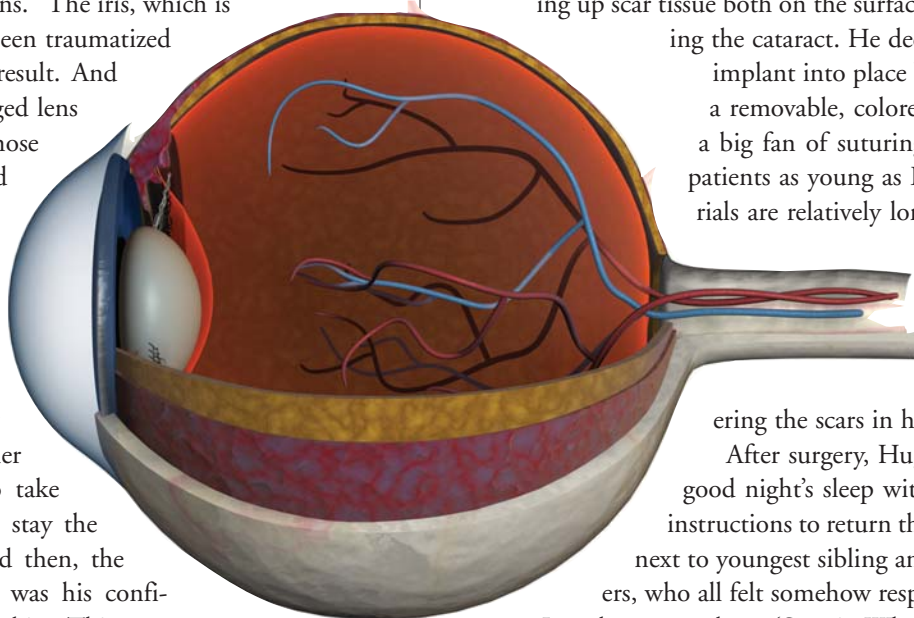
was expecting to have to wait days for the test results. I hardly had time to become nervous. ‘Guess what?’ a technician said, ‘The news is good. You’re a candidate.’”

She had scars on her cornea, “which is the shell to the clear window of the eye,” Chu explains. “The iris, which is the color part of the eye, had been traumatized and had scarred severely as a result. And she had remnants of her damaged lens scattered all over the place. Those pieces along with the scars had been blocking her view as well as the view for any doctors trying to look inside.”

Though Chu, who co-directs the Division of Cornea and Refractive Surgery at IOVS, could not promise that she would regain her vision, Hughes was willing to take the chance. “I had planned to stay the way I was. But right there and then, the most significant thing for me was his confidence,” she says. “I had just met him. This was a person who was going to cut into my eye. He told me there would be risks but I knew I could trust him. For me to be able to make that decision right there on the spur of the moment after 30 years was a real shock.”

Chu explains that the technology had changed dramatically in 30 years. The instruments alone have been remarkably refined. While other doctors had told this patient to leave the eye alone, the case was “a challenge for me,” Chu says. “There were enough clues that she might possibly regain some sort of reasonable vision. This wasn’t a case that you jump into quickly for instant gratification as an eye surgeon.” By contrast today, simple cataract surgery takes only minutes with no stitches. And, with Lasik surgery, he explains, the patient is wearing glasses one minute and the next minute, they’re not. “Those situations don’t excite me. Challenges, with lots of pitfalls, keep me going. Hers would be tricky,” he explains. A mathematician as an undergraduate, he focuses his research attention on inflammatory diseases and likes “the physics of ophthalmology. That’s why I chose this field.” There would be many steps involved. “It would take effort. It would take time and we didn’t know whether Elaine would get her vision back at all. In fact, she would begin a long journey because there was so much wrong with that eye.”

There was also real concern that her initial loss of sight had occurred right at what is considered a cut-off age of six to seven. Would her brain have learned enough vision? Even if he was able to restore the eye physically, would there be any memory in the brain letting her actually see? He couldn’t be sure. “If she did have amblyopia, the surgery wouldn’t have made any difference. Basically the brain can lose the ability to



see.” So, if her accident had occurred any younger, there might not be enough memory embedded to allow vision to return.

In surgery, Chu removed and cleaned out old scattered lens fragments, draining the vitreous fluid humor as part of the process, breaking up scar tissue both on the surface and inside, and removing the cataract. He decided not to stitch a lens implant into place but to plan on the use of a removable, colored contact lens. “I’m not a big fan of suturing lenses into the eyes of patients as young as Elaine. The suture materials are relatively long-lasting but nothing is ever permanent and the contacts can serve two purposes: letting her see, of course, but also covering the scars in her eye.”

After surgery, Hughes left for home and a good night’s sleep with her eye bandaged and instructions to return the following day. “I’m the next to youngest sibling and I have so many brothers, who all felt somehow responsible for the accident.

I used to say to them, ‘Stop it. What could you have done?’” Her youngest brother, Chris, did the chauffeuring on that next day.

On August 6, 2004, when Chu removed the bandages, he held a high powered lens substitute up to her left eye. *Voila*. Her vision in that eye was immediately 20/50. “She was pretty excited,” he remembers.

Excited is not quite the word Hughes herself uses to describe her emotional high. “This really is a miracle,” she insists. “Right away, I could even read the eye chart with my good eye covered,” she says. And when she walked out to the waiting room, her big brother cried. Her mother, who was still alive at the time, was thrilled. “This was one of the happiest moments of her life,” Hughes says.

A month later, when the eye had healed from surgery and, as Chu says, “settled down,” she went for a permanent contact lens fitting. And later that year, she had more surgery to correct double-vision that was being caused by those 30 years of misalignment. Rudolph S. Wagner, MD, a clinical associate professor of ophthalmology at NJMS who specializes in strabismus, performed that procedure.

On follow-up visits to IOVS, Elaine Hughes is the one in the waiting room almost always willing to share her story. She is also the person who can elicit similar happy endings. “I met the daughter of a patient who was able to see after 20 years of being blind in both eyes,” she says in amazement.

So on the day of the interview with Chu, the question just had to come up: “How often do you get to restore sight to someone who has been blind?”

And without a moment of hesitation, smiling, he says, “Hopefully, we do that every day. Or at least we try.” Definitely the answer Elaine Hughes’ optimistic father would have loved. ●



All in a Doctor's Education

From Honey Drops

The modern medical world can be a minefield of multi-cultural encounters.

THEY SIGH. They groan. They complain. They procrastinate. They are busy doctors. And Dominga Padilla, MD, knows their frustrations so well by now. “When you start to talk about cultural competency in medicine, physicians aren’t always happy campers,” says the NJMS instructor, Department of Pediatrics. She should know. Padilla is also the associate director for Cultural Competency Programs at the medical school and has been teaching cultural dynamics here at her alma mater for five years.

A 2000 graduate, Padilla—who works closely with NJMS vice dean Maria Soto-Greene, MD, on curriculum, lectures, workshops, and online offerings—found this past year to be challenging but also rewarding. The state of New Jersey, which passed the law in 2005 requiring that all doctors receive cultural training in order to be licensed, also mandated that physicians earn six new continuing medical education (CME) credits on this topic by June 30. So Padilla had her work cut out for her arranging for faculty, alumni and preceptors—as well as the med students on her regular to-teach list—to study the skills she herself, a practicing pediatrician, takes passionately.

Forget those sighs of frustration or complaint. Padilla lives and breathes this area of medicine every day with a contagious enthusiasm that her students, some of whom were veteran docs, can’t help but sense. Her course, “Using an Interpreter in a Clinical Encounter,” is part of a UMDNJ initiative now online through the Center for Continuing and Outreach Education (CCOE). Raised in Jersey City (born in the Bronx), she considered attending another medical school fleetingly but she felt that nothing could compare to the Newark campus’ multi-cultural scene and when she graduated nine years ago, the school’s administration insisted that she stay.

“Just yesterday,” she says, “in my private practice, I had a couple come to see me because they are expecting a baby this summer.” Of Indian descent, this husband and wife spoke with Padilla for more than an hour covering every possible topic when the man finally said, “My wife is embarrassed to ask you another question but we think it is very

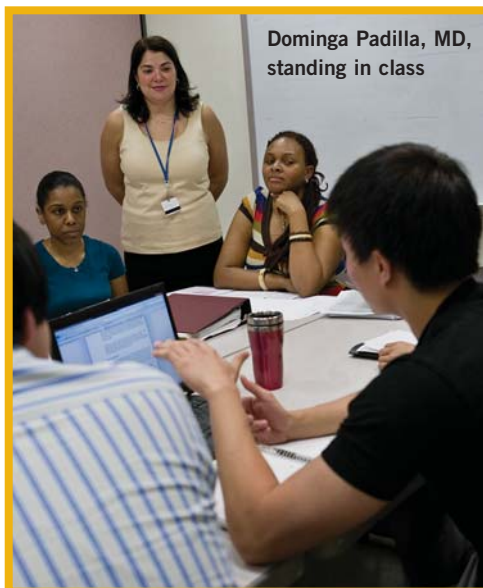
important.” At that point, Padilla told them not to worry and asked what was on their minds. He replied, “Well, in our culture” ... and with that word culture still hanging in mid-air, she thought, “Wow, this is right up my alley.”

They wanted to know if she would be amenable to their putting a drop of honey on their newborn baby’s tongue. “How very interesting,” was all she said at first. Yet, she was immediately aware of the fact that spores of the heat resistant organism *Clostridium botulinum* can be found in honey which could cause infant botulism, a potentially fatal illness. So this cultural practice raised all kinds of medical alarm bells for her. The Center for Disease Control and Prevention (CDC) even recommends that honey not be given to children under a year old. Yet, Padilla held back her professional opinion because cultural competency calls for humility and restraint. And as the workshops in

“Quality Care through Cultural and Linguistic Competence” teach, “To question, doubt, or attack someone’s culture is to question, doubt, or attack that person’s innermost self.”

Instead, she asked this couple to tell her more about their custom. The honey was for good luck, good health and a centuries-old tradition. Hindu and Muslim families often give this kind of pre-lacteal (a ritualistic feeding given before the breast milk comes in) food to babies. So Padilla was non-confrontational describing the possible dangers of giving honey to a baby. And when they heard her concerns, understood the medical explanation, and decided they would not use honey and forgo the custom, Padilla insisted they continue to weigh the issue seriously.

She explains, “What if they didn’t put that drop of honey on the child’s tongue and something happened to the baby? How would they feel then? If it was really important, maybe not giving the honey would somehow plague the child for the rest of his or her life. I didn’t want them to make a rash decision so I asked them to look further into this tradition and to see if they could find a good, reliable source of purified honey.” A quick check in medical journals shows that Saudi Arabian hospital authorities are on record as questioning the



Dominga Padilla, MD, standing in class



By Maryann B. Brinley

to Lizard Soup

validity of this prohibition because processed honey may actually be a safe source. As Padilla told them, “Don’t give up your customs easily. Let’s look into it.”

Her approach came straight from a mnemonic known as ETHNIC which is being used by physicians to enhance culturally competent clinical practice. Doctors and students on campus should be able to pull out their own little yellow plastic ETHNIC note cards from their pockets at all times. The three first letters, ETH, remind them to “explore the patient’s perspective,” so they can develop a diagnosis and be prepared to explain their findings. The “NIC” will help with a treatment plan that the patient will actually follow. Robert C. Like, MD, a professor of family medicine at UMDNJ-Robert Wood Johnson Medical School and director of the Center for Healthy Families and Cultural Diversity, helped create this ETHNIC approach to the physician’s art of taking a medical history.

Padilla’s primary duty at NJMS is to incorporate this kind of ETHNIC thinking into every student’s education and she credits NJMS Interim Dean Robert L. Johnson, MD, and Vice Dean Soto-Greene for their enthusiastic support and firsthand involvement. “We work it into everything and by the fourth year, the students are tested. We don’t want them to become exasperated or turned off so we integrate it so well that students don’t even know they are getting this perspective. And nationally speaking, we are absolutely ahead of the game when compared to other medical schools. We’re a model curriculum,” she says.

Experienced physicians are often surprised by how much they already know and use in their medical practices. Both faculty and alumni were invited to participate in free workshops and classes, both in person and online, in order to meet the New Jersey Board of Medical Examiners’ CME requirements. In the workshops, they reflected on their own cultures and assumptions, looking for personal hot-button cultural issues. Discussions were animated and easy-going as participants checked different perspectives, values, and beliefs about health and illness that could impact patient care, as well as their strategies to overcome obstacles. “Our faculty is so well versed that I learn from them. We end up teaching each other,” Padilla explains.

One workshop brought back a memory for Peter Wenger, MD, NJMS associate professor, preventive medicine and community

health, and pediatrics. On a trip to Africa with the World Health Organization (WHO) as a young physician, Wenger was in a clinic one day handing out anti-diarrheal remedies, packets of salt to be mixed with water. When the physicians walked outside later, salt solution packs were found lying on the ground and in the bushes, tossed aside. “Oh my God,” Wenger remembers thinking, “What happened?”

To get to the bottom of the mystery, the WHO docs needed to go

ETHNIC for answers: to ask the villagers what they thought caused diarrhea and not just why they discarded the remedies. Upon questioning, “Everyone said diarrhea was caused by a plug that wouldn’t let food through the body. Yes, a plug,” Wenger said. After that, packets were distributed in the clinic accompanied by the message that the remedy would help remove plugs. Though exotic, Wenger’s experience emphasized the everyday need in every patient encounter to ask the right questions, the kind spelled out in ETHNIC, in order to elicit a complete medical history, one of the most important tools a doctor has for treatment.

ETHNIC: A Framework for Culturally Competent Clinical Practice	
E	Explanation <i>The patient’s explanation is valuable.</i>
T	Treatment <i>Ask about alternative and complementary approaches being tried.</i>
H	Healers <i>Find out who else has been consulted.</i>
N	Negotiate <i>Work towards a mutually acceptable treatment plan.</i>
I	Intervention <i>Incorporate the patient’s beliefs into the plan.</i>
C	Collaboration <i>Be willing to collaborate with others.</i>

“Ultimately, cultural competency is simply an umbrella, a generic way to describe the importance of being able to communicate effectively with all patients. It’s about being open to others’ thoughts, able to get the patient to do the right thing without compromising his or her beliefs. It’s about health disparities, racial stereotypes, patient-centered care as well as alternative and complementary therapies,” Padilla explains.

No one knows this better than Roger A. Rivera, Jr., MD, a 2008 NJMS grad, former humanism scholar and member of one of the first classes to receive a full dose of content-based cultural competency training in the Jubilee curriculum. Rivera, now a pediatric resident at UH, has family roots in Nicaragua. “My father was a practicing pediatrician in Florida but that didn’t matter. Whenever any of us would get sick, my grandmother would get a lizard and make soup.”

That brought groans of gastronomic dismay from his classmates at one point. Was the soup actually helpful? Maybe. Maybe not. But what Rivera and other NJMS students grasp so well is that one of the things all physicians must learn is that in most cultures, grandmothers can trump doctors. ●

With Love, To the Philippines

A Valentine's Day mission gives children reasons to smile

BY MARY ANN LITTELL • PHOTOS COURTESY OF RICHARD AGAG, MD'04

"LIFE-ALTERING" is how Richard Agag describes his participation in a surgical mission to perform cleft lip and cleft palate surgery on children in the Philippines in February 2009. "It was so amazing to be able to help them," he says. "But what is really amazing is how much I gained from this experience. I never expected that. It's so satisfying to know that the work we do can make such a difference in someone's life."

Agag, who has just completed a residency in plastic surgery at NJMS, was part of a healthcare team of approximately 60 professionals from the U.S. and other countries, including surgeons, anesthesiologists, nurses and support staff, who have been dedicating two weeks of their year to the Philippines. The group visits the Philippines each year to provide free reconstructive plastic surgery to poor children. The trip, sponsored by a Jersey City-based group called PAGES (Philippine American Group of Educators and Surgeons), always coincides with Valentine's Day, an important holiday in the Philippines. The work done by the surgical team exemplifies unconditional love—giving to others without expecting anything in return. Some group members have participated in this mission for the past 19 years.

Agag explains that there is a huge demand for cleft lip and cleft palate repair in the Philippines, which has one of the highest rates of these congenital deformities in the world. Before going on the trip, he estimates he had performed approximately 20 such procedures. That number is now much higher. "One of the surgeons said we were not going to turn a single patient away," says Agag. The team performed a total of 356 surgical procedures; the youngest patient was three months old, the oldest was 47. Procedures done on older patients are generally revisions to earlier operations.

The days were "exhaustingly busy," says Agag. "We were in surgery 12 to 14 hours a day, every day. By the end of the trip my feet were so swollen I could barely put my shoes on." The children line up in the hospital corridors, patiently awaiting their turn. He marvels at their calm demeanor: "They are so sweet. They don't cry or complain. After the surgery, they're in a room together, sometimes up to eight of them, along with their parents. It's hot and they're in pain, with minimal medication. They may not be smiling yet, but you could feel they were happy."

Agag was invited to go on the mission by neonatologist Elmer David, MD, associate professor of pediatrics at NJMS. David, a Filipino, came to live in the U.S. as a child. He joined the faculty at NJMS in 1992 and has been involved with PAGES for 10 years. He's the director of pediatrics for PAGES, and the surgical component of the mission is called Operation HOPE. David led a small group of pediatricians, including an NJMS pediatrics resident, Marianna deBenedictis, participating in her first mission. The group screened patients prior to surgery and provided post-operative care. "It's so rewarding to be able to help these children," he says. "In many parts of the world, children with cleft deformities are treated badly; they are ostracized and often don't go to school. So there's tremendous relief when they have this surgery. Now they'll look like other kids."

Agag, who took most of the photographs on these pages, will soon begin a fellowship in microvascular reconstruction at the University of Pennsylvania. After that, he plans to apply for another fellowship that involves a year of traveling around the world to provide reconstructive surgery services to children in need. He says, "I hope I am able to continue this mission every year." ●





Scenes from NJMS alum Richard Agag's photographic journal including the one of himself on the opposite page taken with one of his little patients. This page, top left: members of the medical team including Agag (left), pediatrics resident Marianna deBenedictis, MD, (second from left), and NJMS neonatologist Elmer David, MD, (far right)

THE POWER OF BMPs

From the backbone to the heart, from building muscle to birth defects, heart disease, stroke and lung cancer, these proteins are life-changers.

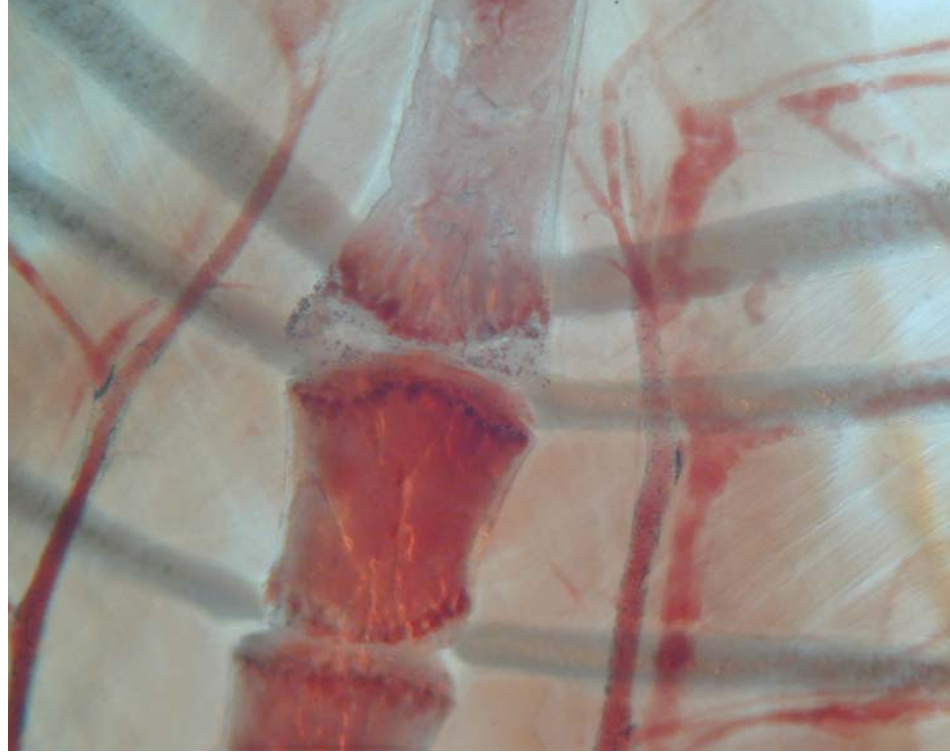
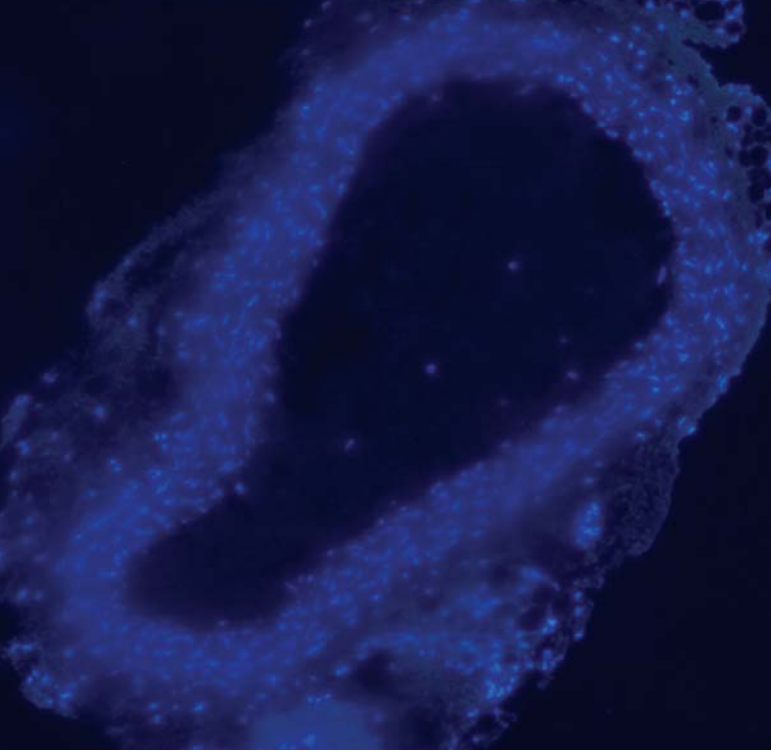
BY EVE JACOBS

IF you still have a mental picture of female scientists as nerdy, bookish and drab, it's time to deconstruct your image. Or you might just want to meet Melissa Rogers, PhD. Born on a 32-acre farm in the Massachusetts Berkshire Hills, the oldest of six children, she grew up helping to raise fruits and vegetables, tending sheep, cows and chickens, and becoming proficient on the French horn. Her mother was a nurse, her father, a typographic compositor for the Berkshire Eagle, a long-established, daily newspaper, and she developed a vibrant personality along with her love of biology.

When it came time to go to college, Rogers chose Rensselaer Polytechnic Institute (RPI) because (don't tell anyone this) she could play the French horn in their orchestra, and also for their excellent science program. "The school is strong in music and orchestra members are dedicated," she says. Initially a premed major, she discovered a love

of research during her college years and decided that practicing medicine was not for her. Even with a seven to one ratio of males to females at that time, RPI was "very supportive of women," she says, and that included women in the sciences. It was at RPI that she participated in her first research project that resulted in a published paper, analyzing PCBs in a public water system, a "GE-associated problem in the Albany area."

Genetics became her field of inquiry. "I had a really inspiring professor who got me excited about this subject," Rogers says, but she credits her nurse-mother with "initially getting me interested in embryology and development." From RPI, she went to Brandeis for graduate work, choosing it for the department's good reputation, its small size, which allowed her lots of hands-on experience, and the close mentoring of students. "They treated me well," she comments.



Images from Melissa Rogers' research laboratory.
Top, left: section of a mouse aorta; top, right: mouse sternum and ribs; and bottom: a mid-gestation mouse embryo showing the expression of a BMP2 reporter gene in blue.



From there she sailed straight to the top, doing her postdoc at the Dana Farber Cancer Institute, an affiliate of Harvard Medical School.

“When you go to a place like Harvard, you sink or swim,” she comments. “There’s not much help along the way. But I always advise post docs to go to the top—the people are the best, there are lots of big grants and the sky is the limit. And everyone is so excited about what they do.”

Rogers is now one of those scientists and teachers, whose excitement about her research inspires others. After nine years on the faculty of the University of South Florida in Tampa, where she studied the many links between cancer and development, she accepted a faculty appointment in the Department of Biochemistry and Molecular Biology at NJMS and moved her work to the Garden State.

“There are a lot of similarities between embryonic cells and cancer cells,” she states.

BMPs (bone morphogenetic proteins) are the theme running through Rogers’ research career. They constitute a group of growth factors and cytokines that play critical roles in the developing heart,

nervous system and other critical structures in the embryo. BMP2, a particular focus, also is required for fracture repair.

“In orthopaedics, BMP2 was one of the first BMPs used to fix bone fusion issues. In embryology, BMP2 defines the dorsal ventral axis, the side on which the backbone forms—and that’s true for invertebrates as well as mammals. It also signals the killing off of cells between the fingers to carve out the digits,” she explains.

Her overall research objective has been to clarify the mechanisms that control the level of BMP2 produced in various parts of the body and to better understand how it influences cell behavior. Some of her work has concentrated on BMP2’s role in the patterning of the human heart during development. “There is a very complicated pattern of signaling, for example, that results in the formation of a valve,” she says.

She explains that the genes that make BMP2 are also involved in tumors, and while BMP2 is required for normal development in the embryo, it’s “bad when the genes are turned on in the wrong tissues later in life.” This protein that is so important in repairing bone is also involved in calcification of blood vessels in adulthood.



Melissa Rogers, PhD

Rogers' team has narrowed down a BMP2 regulatory region that dramatically represses BMP2 expression in many types of cells, including those in the aorta, heart valves and lungs, a finding that could be instrumental in addressing certain heart disorders and birth defects. It controls when, where and how much of the protein is expressed. Abnormal BMP2 levels have been implicated in blood vessel and heart valve calcification, a major contributor to such life-changing disorders as stroke, heart disease, and amputations.

"This is a big chunk of DNA," she says, "with 70 percent of it being the same in primates and fish, and 90 percent of it the same in all mammals and birds."



"We found that over a period of time, Mycoplasma can convert normal lung cells into cells that form tumors ... The expression of higher levels of BMP2 made the cells more aggressive, able to recruit blood vessels."

The advantage of this shared genetic background is that results of laboratory studies done on tissue samples of other species are translatable to humans.

Rogers' BMP2 research has led to an unusual, shared study with scientists from George Washington University, who recruited healthy college student-volunteers and measured the muscle and fat in one arm of each participant. The students were then directed to work out with that arm for a specified period each day. After the prescribed number of days, "some students bulked up more than others," says Rogers, which was not surprising at all to the researchers.

But the biochemical analyses done by Rogers' team found that the degree of bulking-up directly correlated with a BMP2 variant in the regulatory region that is very similar between mammals and fishes. In simpler terms, people with this slight BMP2 gene variation may have synthesized BMP2 at levels that promoted skeletal muscle formation instead of fat build-up.

The results of a larger, NIH-supported study, looking at MRI data from the upper arm of 517 healthy volunteers ages 18 to 41, has been accepted for publication by the *Journal of Cellular Biochemistry* with Rogers as the senior author.

Another of Rogers' BMP2 discoveries garnered major headlines just a few months ago. With collaborator John Langenfeld, PhD, a lung cancer researcher from UMDNJ-Robert Wood Johnson Medical School, she found that the infectious agent Mycoplasma bacterium turns on the synthesis of BMP2 in lung cells.

The discovery resulted from an observation made by a graduate student in Rogers' laboratory. "We were collecting cell lines to study

BMP2," she says. "The cell lines making buckets of BMP2 were the ones infected with Mycoplasma."

The team was able to witness the lung cells starting to transform—or turn malignant.

"These lung cells do not usually make BMP2," Rogers explains. "We found that over a period of time, Mycoplasma can convert normal lung cells into cells that form tumors.

"All normal people have all kinds of bacteria all over their bodies and Mycoplasma is among them," she comments. But what is the relationship between Mycoplasma infection and production of BMP2 in the lungs?

The team found that lung cancer cells infected by this bacterium—but not uninfected control cells—formed tumors in nude mice. The expression of higher levels of BMP2 made the cells more aggressive, able to recruit blood vessels.

This finding, coupled with earlier reports of elevated Mycoplasma infection in lung cancer patients

when compared with healthy controls, suggests "that Mycoplasma may impact the progression of lung cancer," although Rogers believes it is not a direct cause of the cancer.

"Although this bacterium is usually harmless," she continues, "in this case, it turns on synthesis of a growth factor that promotes tumors."

In general, the immune system keeps Mycoplasma under control. "But in a lung cancer patient, perhaps Mycoplasma should be treated with antibiotics because BMP2 synthesis can worsen the disease. It's a simple idea that we hope to test in people in the future."

Not only did this discovery lead to an important finding for lung cancer patients and the physicians who treat them, but to a warning for those who work in laboratories.

Lab samples are often contaminated with Mycoplasma since it's so prevalent, explains Rogers. "This bacterium is tricky. You often don't know it's there."

"Contaminated cell lines skew lab results," says the researcher. Since progress in science depends on meticulous research, and Mycoplasma is such a common contaminant, "everyone needs to be more vigilant."

Rogers' work on both the BMP2-calcification and BMP2-lung cancer links are connected by one goal that excites her with its potential for translation into much-needed therapies. Abnormal BMP2 synthesis is a problem for both vascular calcification and lung cancer. "If we can figure out the molecules that normally turn off BMP2 production, we might then be able to move on to create a drug that could turn BMP2 off in blood vessels or lung tumors," she says. "That's golden." ●

ON Lloyd Webster, Jr.'s first day as a science teacher in a rough-and-tumble neighborhood of Forestville, MD, he set out to establish some ground rules. The burly, former high-school wrestler and football player wanted to make it clear to his eighth-grade class at Andrew Jackson Middle School that under no circumstances would he stand for any nonsense in his classroom.

"I stood before the class and said, 'There are no tough guys in this class, except for me. You're here to learn. If you think you're a tough guy, raise your hand so we can settle this now and get on with the business of learning,'" Webster says, recalling that morning back in September 2002.

As the University of Maryland, Eastern Shore, graduate turned his attention to the lessons for the day, a scrawny boy stood up.

Never expecting to be challenged, Webster, then 23 years old, did the only thing he could: "I told him to sit down!" he says with a laugh as big as his 6-foot, 1-inch frame. "From that day on, he was one of my best students." His words are tinged with a mixture of incredulity and admiration for the scrappy kid who showed such gumption that summer day.

It's this Bowie, MD, native's experience as a teacher—a time marked by successes, challenges and tragedies—that has proven useful in Webster's role as co-director of the Mini-Med Outreach Program, a road-show version of the Mini-Medical School program at NJMS.

Like the Mini-Medical School, a program founded some 10 years ago by NJMS Professor Jacob Lindenthal, PhD, DrPH, Department of Psychiatry, the outreach version's goal is to share important public health information with the community. But that's where the similarity ends.

While the Mini-Med program, which has graduated nearly 5,000



Lloyd Webster, Jr.

PAYING IT BACK

Our medical students are out and about on the Newark volunteer scene, changing lives one at a time.

By Genene W. Morris

"Wouldn't it be nice to go out to educate the down-trodden?" Lindenthal says. With that simple statement, Lindenthal recruited Anjeanette Washington; then-second-year students Paragi Rana and Jason Zucker as well as Lee Flowers, a UMDNJ-School of Public Health student, who had recently completed his first year of med school. They helped initiate the program and this past winter, Patel and Webster took over.

Hour-long lectures, ranging from cardiovascular disease and sexually transmitted diseases to drug abuse and diabetes, are prepared and delivered exclusively by the medical students, under Lindenthal's supervision. "We meet an hour before the sessions, review the lectures,

participants, is geared toward high school students, professionals and community leaders who come to the Newark campus to hear lectures delivered primarily by UMDNJ faculty, the outreach program, now in its second year, is aimed at a population Webster calls "God's forgotten children." They are the people with scarce resources and little access to preventive healthcare services. They are drug-addicted and homeless mothers, youth who have had brushes with the law, and newly released male and female prison inmates preparing to transition back into society.

To reach their target audience, Webster, his co-director and fellow second-year NJMS student Laju Patel, and about a dozen other medical students hit the road this year every Wednesday afternoon over a nine-week period between January and March. Their excursions brought them to two Newark facilities: the Kintock House, for paroled male and female inmates and the Newark Renaissance House, Inc., a shelter for troubled youth as well as homeless women and their children.

"A couple years ago some of our volunteers and I thought,

and then split up to go to both locations,” Lindenthal notes, adding that the students “are just golden.”

Patel, a Duke University graduate, admits being uncertain initially about what to expect but when she saw how appreciative the residents of both facilities were, a real sense of purpose took over.

“You get there and they’re so interested and full of questions,” says Patel, an East Brunswick native. “They really want to know and learn and see how this information can change their lives and their health behaviors and lifestyles. You feel like you’re doing a service. It’s so rewarding.”

She says one of the biggest challenges is recruiting medical students because they’re so strapped for time. Those who can, however, get as much out of the sessions as the audience.

“All the students who come with us love it,” Patel says. Her parents always instilled in her the importance of giving back to the community and it’s a lesson she’s taken to heart. “If you have the opportunity and ability to help others, you should,” she says. “I think that’s a reason why you want to become a doctor.”

It’s that kind of passion for service and eagerness to impart knowledge that have made the students a hit at both the Kintock House and the Newark Renaissance House, say the respective administrators.

“The experience of working with the team from UMDNJ puts a whole different spin on everything we do,” says Dominick Forte, senior director of parole services at Kintock, home to male and female parolees who live at the facility from 90 to 100 days as they prepare for reentry into society. “The residents are very responsive to the team. They brought good information at a level the residents can understand and interpret.”

Dorothy Scull, RN, director of nursing at Renaissance, echoes Forte’s sentiments. “It was very impressive. I really didn’t know what to expect when we set this up. We were all so very pleased with the program and the connection of the medical students and UMDNJ to the community,” Scull says. “We found the students to be extremely nice, very friendly and knowledgeable. They came prepared for every session with nicely printed materials. The information was concise and easy to understand.”

Although the program’s primary purpose was to share public health information to help residents make healthy lifestyle choices, a by-product of the sessions was the sense of hope the students inspired. Especially notable, says Scull, was a connection that one first-year medical student, Eyone Jones, had with the boys enrolled in the Renaissance House’s adolescent services program.

Jones knows first-hand about the struggles and challenges these boys face. The Gros-Islet, St. Lucia, native came to the U.S. when he was seven years old and after a series of moves from East Orange to Brooklyn, Jones ended up in an inner-city neighborhood in Miami where life was filled with unimaginable challenges. On his own at age 16; working and going to school full time at age 17; and told by a high school guidance counselor to abandon his long-held dream of becoming a doctor to, instead, pick up a trade, Jones embarked on a mission

to pursue his “better.”

And that’s what Jones, who holds a bachelor’s from SUNY College at Oneonta and a master’s in medical technology from SUNY Upstate Medical University, hopes the boys got out of the sessions: motivation to pursue their own “better.”

“A ‘better’ is anything that a person can aspire to that would lead to an improvement of their current situation,” Jones says. “My better was medicine.” His path to success wasn’t an easy one, he notes. “It’s difficult to change your current situation without first having to change your mental outlook. Living in the inner-city, I was exposed to a different world. The conversations, the mentality, all of it, made seeing a way out extremely tough. I never thought that I would ever end up in college,” Jones says. “I tell people my greatest accomplishment wasn’t getting an undergrad degree, it wasn’t getting a master’s, or getting into medical school. It was graduating from high school.” While the 31-year-old shies away from the limelight, he is passionate about helping others get on the path toward self-empowerment.

It is that passion coupled with his life’s experience that allowed Jones to connect with boys like Anthony, 16, and Terrell, 17. Both adolescents previously had run-ins with the law that landed them at Renaissance’s doorsteps. But meeting Jones gave them hope to escape their tumultuous pasts and to look toward futures where possibilities extend as far as the mind’s eye can see.

The sessions “made me feel like I don’t want to be in a place like this no more. I can get my education. I can be a doctor or a lawyer or something like that. When I was on the streets, I never believed that until I got in here... then I started talking to all different kinds of people...I started believing...,” says Anthony. “I want to be a teacher,” he proudly declares.

Terrell, already a father of two, with a keen sense of style, chimes in: “You don’t find too many doctors that will sit down and talk to you,” noting his experience with doctors was limited to routine check-ups. “To me when (the medical students) came...I wanted to be a doctor...”

Meanwhile, as a science teacher, Lloyd Webster never envisioned becoming a physician. His father, an engineer, and mother, a science teacher, always stressed the importance of education, but it took his participation in the Minority Medical Education Program at UMDNJ (now called the Student Medical and Dental Education Program) that convinced him to pursue a career in medicine. A Robert Wood Johnson Foundation-funded endeavor, the program was designed to improve minority acceptance rates at medical schools by preparing academically qualified minority students for the rigors of the medical school selection process.

“That experience made me feel like medical school was in my reach,” says Webster. “I’m actually the first aspiring doctor in the family. I don’t think anyone thought I would be a doctor. But I don’t have a sense of superiority. A lot of people in our position feel privileged, overly so. I think I’m more grounded because of my experiences before coming to medical school.” ●

A Message from the President



A Letter from “The Front Lines”

In my first communication to you in the last issue of *Pulse* magazine as the new NJMS Alumni President, I encouraged all alumni to “come back home,” to visit your medical school once again and the University Hospital where you experienced both the excitement and awe that always accompany seeing our “first patient.” That invitation is still open.

In 1985, on the occasion of the 25th anniversary of NJMS, former Dean Vincent A. Lanzoni, MD, PhD, predicted, “When NJMS reaches its fiftieth anniversary, we expect to see an outstanding medical center on the Newark campus with primary and tertiary centers. With this will come research and education. But most of all, we hope to have attained the fullest confidence of our fellow New Jerseyans and their conviction that they can find the finest medical care within the borders of their own state.” While those goals are not yet fully attained, we have come a long way in our journey to make these words a reality.

NJMS has grown in many ways since 1985, with the Alumni Association remaining steadfast in its fundraising efforts to support student scholarships and programs. In addition to providing over \$175,000 in scholarships in 2008, we have both directly and indirectly enabled our students to experience healthcare in foreign countries through the International Studies Grants, to continue the early contact with patients provided by the Student Health Care Center (student-founded and maintained for almost 40 years!), as well as assisting them in their residency decisions at career nights. These and many other Alumni-sponsored events were made possible by your support; and once again, I strongly urge and encourage you to help us protect the legacy that made you the successful practitioner that you are today.

We are planning to mark this golden anniversary beginning with the White Coat ceremony on August 13, as we welcome the incoming Class of 2013. It is most fitting that the first NJMS Alumni President, Roger Q. Cracco, MD'60, will inaugurate the celebration of the fiftieth anniversary year by leading our new students in reciting the Oath of Hippocrates, which we have all taken. The golden anniversary year will conclude with a reunion and a gala event on the weekend of May 15, 2010. Details will be mailed to all, so please plan to join us in the celebration of our alma mater. —**JAMES M. OLESKE, MD'71, MPH**

SAVE THESE DATES

August 13

White Coat Ceremony

October 1

Autism Gala / Fundraiser

*For more upcoming events, check the
NJMS website.*



A Golden Touch for White Coat Ceremony

At the White Coat ceremony on Aug. 13, the incoming medical students in the class of 2013 will be led in the reading the Hippocratic Oath by a member of the charter class of 1960. That first group of 71 students will celebrate their fiftieth anniversary in 2010 so the word of the day will be golden. In fact, the summer event to welcome new students will also include a special reception for those first early graduates, who are being urged to watch their mail and email inboxes for information about a gala reunion being planned for the weekend of May 15, 2010. ●

Golden Apples Galore

The NJMS community turned out in record numbers for the Alumni Reunion and Golden Apple Awards Dinner Dance at the Sheraton Parsippany Hotel on April 4 to recognize excellence at the medical school, share laughter, and dance the night away.

Alumni Association President James M. Oleske, MD'71, MPH; UMDNJ President William F. Owen, Jr., MD; and NJMS Interim Dean Robert L. Johnson, MD'72, kicked off the festivities for 425 guests—the largest group ever to attend the annual banquet.

“The students really did a phenomenal job,” says Alumni Association Coordinator Dianne Mink, describing the work of the programming co-chairs Ryan Chadha, Samuel Chu and Jenifer Hashem, and crediting them for the large turnout.

The event, sponsored by the Alumni Association of NJMS and the NJMS Student Council, continues a 47-year-old tradition that honors faculty, residents and alumni. Golden Apple Awards are presented to faculty and residents who have been singled out by the student body as the best teachers. This year's winners were: David DeFouw, PhD; Paolo Varricchio, MD; Sylvia Christakos, PhD; Kenneth Klein, MD; Barbara Fadem, PhD; Lester Sultatos, PhD; Cynthia Paige, MD'89; Ziad Sifri,



MD; Devashish Anjaria, MD; Vadim Pisarenko, MD; Bill Riccardelli, MD; Gregory Tiesi, MD; Ralph Oriscello, MD'63; Neil Kothari, MD'00; Muhamed Saric, PhD, MD; Tim Mainardi, MD'06; Anthony Watkins, MD; Ritu Sharma, MD'05; Zeyad Baker, MD; I. Thomas Cohen, MD, and Denise Rodgers, MD.

The Association also presented the Charles L. Brown Award to Susan Hagen Morrison, MD'81; the Distinguished Professor Award to Donald B. Louria, MD; and the Honorary Alumnus Award to Allen B. Weisse, MD. A moment of silence was also observed for long-time NJMS faculty member Eric Munoz, MD, who passed away suddenly in March. ●



1 NJMS students

2 Left to right: NJMS Student Council President Anita Thurakal, MD'09 presented a Golden Apple Award to Denise Rodgers, MD, executive vice president, academic and clinical affairs.

3 Center: Susan H. Morrison, MD'81, with family left to right: Sean Baron, Julia Morrison, Douglas Morrison, MD, and Daniel Morrison

4 25th Anniversary celebrants of the Class of '84, left to right: Drs. Joshua Rosenblatt, Edward Adler, Carol Sofio, Yolanda Cillo, Elizabeth Delaney, Allan Tunkel, and center, Dr. Joseph Benevenia. Class members not pictured were Drs. Patricia Renz and Daniel Luciano.

5 Left to right: William F. Owen, Jr., MD, UMDNJ President; Allen Weisse, MD, Honorary Alumnus Award recipient; Susan H. Morrison, MD'81, Charles L. Brown Award recipient; Donald B. Louria, MD, Distinguished Professor Award recipient; James M. Oleske, MD'71, MPH, Alumni Association president; and NJMS Interim Dean Robert L. Johnson, MD'72



KENDELL SPROTT MD'77

He Said

Doctor, lawyer, teacher, father and medical school leader, **Kendell Sprott, MD'77**, fell in love at NJMS with pediatrics, teaching and his future wife.

KENDELL Sprott wears many hats. Throughout his long career as a pediatrician, he has served as a tireless advocate for children in need. At NJMS, he's spent the last 30 years teaching. He is also the school's acting chair of pediatrics and was recently named senior associate dean of clinical affairs. That's a pretty full plate, but Sprott filled it even higher, finding time along the way to obtain a law degree.

Sprott hails from Beaumont, TX, a small town near the Louisiana border and the Gulf of Mexico. His grandfather, the first black postman in Beaumont, was a strong believer in the value of a good education. "My grandfather had nine children, and all of them are college graduates," the physician says proudly. "Three of them, including my father, became MDs, and one obtained a PhD. The women in the family all became teachers and all had Master's degrees."

Sprott says it wasn't easy educating nine children on a postman's salary, but the family managed through creative collaboration: "They helped each other, rather than relying on him," he explains. "They didn't all go straight through. They'd stop and work for awhile and then go on. And once someone graduated, they helped the person behind."

In those days of segregation, black physicians were not granted admitting privileges at hospitals. So Sprott's father and uncles started their own hospital right in Beaumont and ran it successfully for many years before the onset of integration gave black physicians the same privileges as their white counterparts.

Coming from such a family environment, it was no surprise that Sprott developed a

strong interest in medicine. He attended Morehouse College in Atlanta as an undergraduate and became involved in several research programs at Oak Ridge National Lab in Tennessee, Argonne National Lab in Illinois, and at Emory University in Atlanta.

When asked what brought him to New Jersey—and kept him there—the physician laughs and says, "Luck and God." As a college senior, he attended a conference in New York City, where NJMS was represented. "They asked me to fill out an application, so I did, and then didn't think much about it. When I was accepted and offered a scholarship, of course I said yes."

Not only did Sprott receive an education and launch a career at NJMS—he also met his wife: fellow alum Donna Twisdale, MD. Both members of the class of 1977, they were in an NJMS lab program the summer before starting medical school. "I always intended to go back to Texas, but once I met my wife, that was the end of that plan. We stayed at NJMS for our residencies—mine in pediatrics, hers in obstetrics and gynecology."

Twisdale's residency was a year longer than Sprott's, so when he finished his in 1979, he decided to try teaching. "It seemed like an interesting thing to do for a year—a stable job that wouldn't tie me down too much." He joined the NJMS faculty and began teaching at Newark's Children's Hospital.

Somewhat to his surprise, Sprott relished his role teaching medical students and residents the clinical and intuitive skills they'd

Continued on page 37

**Profiles by
Mary Ann Littell**

DONNA TWISDALE MD'77

She Said

For **Donna Twisdale, MD'77**, gynecologist, pharmacy graduate, mother and former superwoman, the feeling was obviously mutual. They were married 32 years ago this summer.

IF ever a woman had it all, it's Donna Twisdale. This NJMS grad forged a wonderful career, practicing obstetrics and gynecology in the Garden State for almost 30 years. She raised two children without missing a school play, concert or special event, "though I often arrived at the last minute and stood in the back!" she says. Fashion-model slim, she has a great sense of humor and an infectious laugh. And oh, yes—she's married to the handsome guy on the opposite page.

"The reason I was able to do all this is because we were a tag team, Kendell and I," she says. "We had to be. We multitasked, were super-organized and coordinated our schedules to make sure we were never on call at the same time. That's how we were able to work and raise our family."

While Twisdale leads a charmed life, she's worked hard to make it all happen. The daughter of a single mom, she and her two brothers grew up in Atlantic City. When she graduated from high school, college wasn't in the financial picture, so she took a job at the post office for a year to earn money. She went to pharmacy school, starting at West Virginia and transferring to Rutgers in Newark because she couldn't afford to continue out of state.

After pharmacy school, "I decided to keep going," she says. By this time, she'd acquired two mentors: Tom Evans, a dentist who worked for a pharmaceutical company, and E. Wyman Garrett, an ob/gyn in Newark. Evans encouraged her to go to dental school, while Garrett pushed for medical school. "Medical school won out," she says.

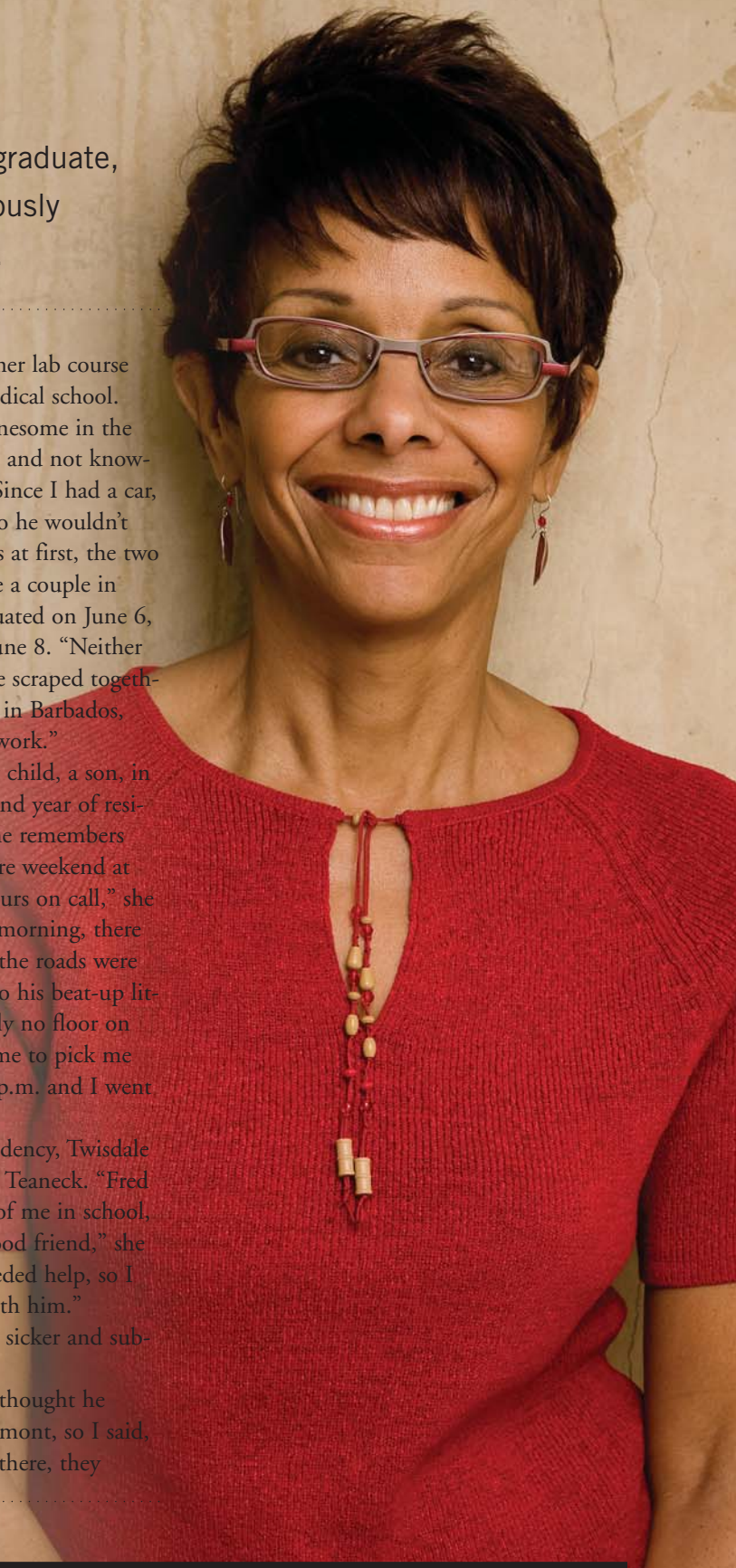
She met Sprott in a summer lab course they took before starting medical school. "He looked a bit lost and lonesome in the beginning, being from Texas and not knowing anybody," she admits. "Since I had a car, I offered him rides to class so he wouldn't have to catch a bus." Friends at first, the two studied together and became a couple in their junior year. They graduated on June 6, 1977, and got married on June 8. "Neither of us had any money, but we scraped together enough for a honeymoon in Barbados, came back and got right to work."

The couple had their first child, a son, in 1979, during Twisdale's second year of residency. That's one delivery she remembers well. "I had worked the entire weekend at Hackensack Hospital, 54 hours on call," she says. "When I finished that morning, there was a huge snowstorm, and the roads were very bad. So Kendell got into his beat-up little Datsun—it had practically no floor on the passenger side—and came to pick me up. We got home around 1 p.m. and I went into labor three hours later."

Upon completing her residency, Twisdale joined an ob/gyn practice in Teaneck. "Fred Lane was a few years ahead of me in school, a wonderful person and a good friend," she says. "He became ill and needed help, so I spent some time working with him." Unfortunately, Lane became sicker and subsequently died.

Eventually, "my husband thought he might like to return to Beaumont, so I said, 'Fine, let's go.'" After a year there, they

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James R. Phelan, MD, and
Mike Fincke, COL, USAF,
NASA astronaut

JAMES R. PHELAN, MD '68

Out of this World Medicine

By Jennifer S. Doktorski

EVER since he began practicing medicine, James R. Phelan, MD, '68, has been treating patients who defy gravity and break both the sound barrier and land speed records on a regular basis. Navy pilots, astronauts and race car drivers have all been part of a normal day at the "office" for Phelan.

Now, at a time in his medical career when retirement could be an option, Phelan is instead working part-time for NASA, making regular trips to Star City, Russia, to treat astronauts and support them as they perform hazardous training.

"There's not much illness among the astronauts there, but I'm still busy," Phelan says. "A major part of my job in Russia is to accompany the astronauts to their high-risk training events, some of which are in places over 90 minutes from Star City."

Phelan observes astronauts as they perform simulations in vacuum chambers, and practice space walks in a Hydrolab. He's also on hand when American and Canadian astronauts get spun in huge centrifuges and undergo winter survival training.

"They spend 48 hours outdoors in the Russian winter." Luckily, "I'm given a small cold room indoors," Phelan admits. "I have to bring about 50 pounds of medical equipment to each of these events, but fortunately I'm provided transportation by either a NASA van with a Russian driver or a Russian van."

Although Phelan, known as "Jay," says he wasn't interested in flight surgery or aerospace medicine while attending NJMS, his cousin John Martin, a naval aviator, gave him the idea shortly after graduation. Tragically, Phelan's cousin was killed while training for a tour in Vietnam.

After graduation from NJMS, Phelan completed an internship at Northwestern in what was known then as straight medicine, he explains. "Since I hoped to become a Navy flight surgeon and thought I'd go into internal medicine eventually, I was advised to get a good background in diagnostic medicine. This internship included a month of pediatrics, six weeks of emergency medicine, a month of radiology and rotations through

hematology-oncology, cardiology, intensive care and charity service medicine." He followed up with flight surgeon training in Pensacola. In 1970, Phelan began his career as an air wing flight surgeon with Carrier Air Wing 11. In the early 1970s, Phelan made two lengthy deployments to Vietnam aboard the USS Kittyhawk, an aircraft carrier.

"My squadrons let me fly in the back seat of the F-4 Phantom, and I accumulated enough combat missions to earn an Air Medal. Things have seemed a bit dull in comparison ever since," Phelan says.

In 1976, after completing a residency in otolaryngology at the Naval Regional Medical Center Oakland, Phelan began his tour of duty as head of the department of otolaryngology at the Naval Regional Medical Center Great Lakes. His first experience with NASA was as a Naval reservist in private practice in Santa Barbara, CA. "I did my two weeks annual training at Johnson Space Center in 1991 and 1992 thanks to my friendship with Dr. Richard Jennings, head of the flight medicine clinic there at the time," Phelan recalls.

In 1993, he was asked to come back on active duty as head of the Department of Otolaryngology at the Naval Aerospace Medical Institute in Pensacola—a position he held for 12 years until he reached mandatory retirement age.

"During those years I supported many space shuttle launches and landings at Cape Canaveral as an air doc, assigned to an Air Force H-60 helicopter configured for trauma rescue," Phelan explains. "Upon my retirement from the Navy, this NASA connection led directly to my current employment."

Remarkably, throughout most of his out-of-this-world career, Phelan has found time to treat race car drivers at events like the Indy-car races run by Championship Auto Racing Teams, the American Le Mans Series, and Formula BMW races sponsored by the International Motor Sports Association. "I'm very happy with the way things have turned out, and if I had to stop working tomorrow, I don't believe I'd have any regrets about the decisions I've made." ●

He Said

Continued from page 34

need as physicians. “As a teacher, I became very interested in how we learn. When I asked students questions, I found that their answers were based more on their ability to memorize information rather than understanding it. I became interested in how memory is fallible. Unless you use information over and over, it’s hard for your memory to retain it. But when you really understand something, it stays with you forever.”

Sprott decided to stay in teaching, and over time, assumed a leadership role at the hospital, serving as head of the pediatric ICU as well as on several committees. He also became more occupied with day-to-day administration and community outreach activities. “I had several mentors who were very interested in advocating for children, including Rich Rapkin, the hospital’s medical director, and John Alexander, a community pediatrician who was involved both locally and at the state level in child advocacy issues. He got me into hosting a weekly radio program. A third mentor, Milton Prystowsky, was a pre-eminent pediatric cardiologist who was also doing a lot of advocacy work.”

As Sprott’s role grew, Rapkin suggested attaining another degree, in law, hospital administration or public health. “I’d never considered law, but it seemed like the closest fit,” he says. “It’s based on logic and analytical reasoning, the same tools I used in teaching. I wasn’t sure how it would help me in my career, but I figured it couldn’t hurt.”

He was accepted into a part-time evening program that took four years instead of the usual three, and received his degree in 1994. “I use what I learned in law school every day,” he says “It’s helpful with simple things, like counseling residents as they finish their residencies, join practices and get jobs. I can help them with their contracts and tell them what changes to make. I also advise people when they have legal difficulties.

Administratively, an understanding of law is valuable with compliance and contract issues. A law degree isn’t a necessary thing

for a chair to have, but it’s very beneficial.”

Sprott left United Hospitals in 1997, a few years before it closed, to become director of community pediatrics and vice chair of pediatrics at Children’s Hospital of New Jersey, now part of Newark Beth Israel Medical Center. All the while, he had maintained ties to NJMS and had kept up his faculty appointment. In July 2005, he returned “home,” becoming vice chair of pediatrics at NJMS and chief of service, pediatrics, at UMDNJ-University Hospital.

“In law school, I took as many courses as I could that related to children, law and medicine,” he says. “I’ve worked very hard on issues pertaining to child welfare, children’s services and foster care.” He has been involved with the Association for Children of New Jersey, a child advocacy group, WIC (Women, Infants and Children), a nutrition program for the disadvantaged, the Rutgers Community Health Foundation, Children’s Futures, a Trenton-based organization funded by the Robert Wood Johnson Foundation, and is the UMDNJ representative on the Governor’s Council on Autism.

In his spare time, Sprott writes a weekly column for *The Star-Ledger*, answering readers’ questions.

Sprott and his wife love to travel, and recently took a trip to Shanghai, where their daughter, a junior at Spelman College in Atlanta, was studying. “A fantastic trip,” he says. The couple also has a son in Atlanta. They enjoy the beach, Atlantic City (Twisdale’s hometown) and heading to the Caribbean. “I like to ride the waves and the boogie board,” says Sprott. “My wife doesn’t. She can, but she doesn’t. So my daughter rides the waves with me.”

This consummate teacher, a recipient of the NJMS Golden Apple Award for Teaching Excellence, says he’s just where he wants to be, “despite being pulled in a lot of different directions.” When asked what he loves most about his job, he doesn’t hesitate: “It’s teaching and student interaction.” ●

She Said

Continued from page 35

missed New Jersey and came back., settling in Plainfield. In 1984, Twisdale and a classmate, Dolores Johnson, MD, started a practice in South Plainfield. Her second child, a daughter, was born in 1988. “It was busy and I enjoyed it, but it was demanding. With the OB side, you’re always on call. It’s difficult to do that and raise a family too. Kendell and I didn’t take a vacation for the first nine years we were married.”

Johnson retired in 1996, and Twisdale practiced solo for awhile. A few years ago, she “downsized,” closing the office and joining another group where she practices only gynecology just 28 hours a week. “I enjoyed what I did when I did it, but it’s a new day now,” she says. “No more superwoman. Been there, done that.”

As a black woman who entered medicine when there were few women or blacks in the field, Twisdale remarks, “The woman part of it was never an issue.” However, being the only African American in her pharmacy class “was quite a challenge. People would say things, or treat me as if I were different, and I would have to respond to it. It was hard being the only one.” Fortunately, once she got to NJMS, she had the company of 24 other black students. “We had great camaraderie and stuck together to make sure we all made it through.”

One of her biggest fears is that she wasn’t there for her children—but they assure her that’s not the case. “I asked my son if he felt shortchanged in any way, and he told me, ‘Mom, you were always there.’ I worked hard to be there for them.” Working less frees her to see her family more often.

If she had to do it over, she wouldn’t change a thing about her busy life. “We’re married 32 years, and it’s been a wonderful adventure,” she states. “For me, it was a perfect decision. What made it work is that we’re both in medicine, so we understood the demands and pressures and supported each other every step of the way.” ●

Your News from Old Friends

How are you? What are you doing with your life? Send us an update, a photo, a story idea or just your latest address. *Pulse* magazine is your way to stay in touch. Mail this form to: Alumni Association of New Jersey Medical School, 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 or fax us at (973)972-2251.

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What I Have Been Doing (enclose photos)		

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

1960'S

Robert Chernaik, MD'61 was given Brookhaven Hospital's top honor, the Dr. Jacob Dranitzke Award, at the hospital's annual ball in November 2008.

Frederick A. Kayal, MD'69 was recently appointed a clinical assistant professor of medicine at New York Medical College, Valhalla, NY.

Robert A. Seidel, MD'63 is in Scituate, MA, and still practicing internal medicine, but working less.

1970'S

Thomas Dayspring, MD, FACP'72 was a faculty chair of a CME satellite symposium on TG/HDL Axis Disorders at the American Heart Association's Scientific Session in New Orleans in November 2008. He also addressed Japanese leaders on hepatic and enterocyte sterol biology. He authored a paper called "Monitoring the Lipid Profile in Women" in the December issue of *OBG Management*.

David Isralowitz, MD'75 practices geriatrics and has joined New Jersey Physicians, LLC.

Richard Stark, MD'79 was appointed the national director of primary care clinic operations for the Department of Veterans Affairs, Washington, DC.

Richard Waldman, MD'72 has been voted President Elect in nomination by the American College of Obstetrics and Gynecology. Waldman resides in Jamesville, NY.

1980'S

Carole A. Sofio, MD'84 and classmate **Liz Delaney, MD'84** enjoyed the 25th Reunion of the Class of 1984 at the Alumni Reunion and Golden Apple Awards Dinner on April 4. A physician in Orange, CA, Sofio remarked, "After 25 years, Dr. Sylvia Christakos is still winning Golden Apples."

Joseph L. Wright, MD'83, MPH, FAAP is the executive director of the Child Health Advocacy Institute and

senior investigator of the emergency medical services for Children's National Resource Center of Children's National Medical Center in Washington, DC. Professor and vice chair of pediatrics and professor of emergency medicine and health policy at George Washington University Schools of Medicine, in November 2008, Wright was appointed to the 14 member Pediatric Advisory Committee.

1990'S

Vincent J. Barba, MD'93, FACP, FHM was elected Fellow in Hospital Medicine by the Society of Hospital Medicine. Barba is President and Founding Member of the Society of Hospital Medicine of NJ, an assistant professor of medicine at NJMS, and medical director for quality improvement at UH.

Michael Curi, MD'98 and his wife Lisa welcomed their third son, Adib, in December 2008. Curi, a vascular surgeon, moved his practice from the University of Maryland to Anne Arundel Medical Center in January 2009 and is now in a two-person private practice called Chesapeake Vascular Associates.

Michele Sak Grove, MD'95 and her husband Tim live in Flemington, NJ, with their two sons, Connor, 9, and Owen, 5. Grove has been practicing

ob-gyn at Hunterdon Medical Center since July 1999 and is currently with the All Women's Healthcare group.

Kathleen Meade Higgins, MD'90 is board certified in internal medicine and an attending physician at Cooley-Dickson Hospital, Northampton, MA.

2000'S

Douglas Guggenheim, MD'07 won the Arnold P. Gold Humanism Society-Excellence in Teaching and Humanism Award and was named chief medical resident at the Thomas Jefferson University Hospital internal medicine program for 2010-11.

Michael Janeczko, MD'01 married Suzanne Koziol on June 23, 2008. They reside in Plymouth Meeting, PA.

Jan M. Pattanayak, MD'01 is finishing interventional cardiology this summer and plans to practice in North Carolina. Pattanayak's daughter was born in November 2008.

Brian Prystowsky, MD'06 got married in May 2009 to Ellen Greene, a fourth year medical student at UMass Medical School in Worcester, MA. She matched for a residency in family medicine in Santa Rosa, CA, and he accepted a position in primary care pediatrics in the same program beginning July 1, 2009.



Are You in this Picture?

We pulled this from an NJMS yearbook that seemed to celebrate the fact that, yes, medical students could have social lives. If you find yourself here, please write and let us know.

Email: njmsalum@umdnj.edu

IN MEMORIAM

The Alumni Association and NJMS extend deepest sympathies to the families and friends of:

Eric Munoz, MD, professor, surgery, in March. A 1974 graduate of the Albert Einstein College of Medicine, Munoz joined the NJMS faculty in 1988. A respected trauma surgeon and administrator, Munoz held numerous leadership positions at NJMS and UH, serving as associate dean for graduate medical education (1997–2001), associate dean for continuing medical education (1998–2001), medical affairs liaison at UH (1997–) as well as president of the UH medical staff (2003–2004 and 2005–2006), and chairman of the UH Performance Improvement Committee (2001–2002). A former chairman of the Medical Practitioner Review Panel, a position he held for 11 years, Munoz served in the New Jersey Legislature as an assemblyman representing the 21st district.

Friedrich P.J. Diecke, Dr Sc, former chair of the Department of Physiology (1975–1993) and professor emeritus, pharmacology & physiology. A graduate of the University of Würzburg in Germany, Diecke conducted postdoctoral studies at UCLA and the Rockefeller Institute. Prior to coming to NJMS, Diecke held positions at the University of Tennessee, George Washington University and the University of Iowa.

Focus on Philanthropy

Continued from page 40

continues Goncalves. “It was finally done on June 5, 2003.” Surgical decompression, stabilization, and fusion at both injury sites were done to “place the spine in an anatomic position to maximize the opportunity for recovery and to provide long-term stability to the spine,” according to Heary. “Oftentimes, two surgeries of such magnitude are not performed at the same time; however, in Goncalves’ situation, he was young and healthy so the surgeries went very well. He was able to have both of his major injuries treated in a single anesthetic session.”

After he recovered, Goncalves was taken to Kessler Institute in West Orange for therapy. “The first time I remember meeting Dr. Heary face-to-face was after I went to Kessler,” recalls Goncalves. “I asked him if I would ever walk again and he said honestly, ‘No, you will be like this for the rest of your life.’ I couldn’t believe it. I was so disappointed and depressed.”

The first two years were very difficult for Goncalves. “But I learned to accept it,” he says. In fact, he appreciates his excellent medical care. “They saved my life.” After learning about the research going on at the Tim Reynolds Family Spinal Cord Laboratory, Goncalves felt he needed to give something back.

“I was very impressed and thought maybe they can find a cure,” explains Goncalves. “My wife and I decided to give a monetary gift to the Spinal Cord Laboratory through the Foundation of UMDNJ,” he continues, “We feel Dr. Heary is very good, very professional, and he doesn’t care if you are rich or poor.” With this gift, the Foundation of UMDNJ established the Fernando and Lucia Goncalves Research and Education Fund at UMDNJ–New Jersey Medical School.

Goncalves moved to the U.S. from Portugal with his wife in 1995, and resides in Manalapan, NJ, with his two children, Jessica, age eleven, and John, nine, who were six and four at the time of the accident. Before the disaster, he recalls going to the park all the time to walk or play soccer with his son and daughter. “I asked my daughter if she remembers and she said yes, but when I asked my son, he said, ‘No, I don’t remember when you walked.’ I can’t blame him, he was only four years old,” says Goncalves. “While I am alive, I want to see them grow up and get a good education. That’s what matters.”

Goncalves, now 36, is in great health. “I don’t care if I am paralyzed, I just want to stay healthy for my family,” he says. “I play tennis and baseball with them in the backyard. I cook good hamburgers. I play in the pool with them.

“How life changes,” he says. “You get up to go to work, have a nice job, make money, especially as a union worker in New York and then in an instant, your independence is taken away.” But he doesn’t let his handicap prevent him from going places. “I go everywhere,” states Goncalves. “Every year I go to Portugal with my family. I am the first one in and the first one out of the plane, which is nice. And I am looking forward to going with my family to Disney World.” ●

The costume-garbed characters in the 1986 yearbook photo we ran in the winter 2009 issue of *Pulse* were identified by Lisa Simon



Jamison, MD’86. “Despite the academic rigors of med school, we managed to have lots of fun too. Seeing the photo brought back many very happy memories,” says this mother of five and practicing obstetrician/gynecologist in central Wisconsin. It was taken in the Gross Anatomy lab with Professor Nagaswami Vasan, PhD, (see “Born To Teach” on page 15) on Halloween. Her cadaver partners were Lisa Zandonella (farthest left), Al “Tex” Zito in the red hat, Mark Cosentino (far right) and that’s Simon Jamison as the French maid. The adjacent lab group members were Joe Nicotra, a vampire in the Camden program, Jenny Williams (she thinks), a witch, and Paul Jahn (back right). “The photo captures a wonderful and very distant time of my life,” she says. And, “P.S. I’d love to catch up with any classmates!”

Living Life to the Fullest

A construction site catastrophe turned a humble Portuguese father into an extraordinary gift-giver.

By Doris Cortes-Delgado

WE all take the simple things in life like walking and running for granted. Fernando Goncalves knows first hand how it feels not to be able to walk or run—as he once did.

Goncalves, a construction employee for the Carp Construction Company in Staten Island, NY, was at work like any other day. But this wasn't any ordinary day; it was May 19, 2003, the day that changed his life forever. While working in Queens, NY, on a water main pipe in a hole on the street, a steel pipe weighing about a ton fell on his back. "I passed out," says Goncalves. "When I woke up, two of my friends were trying to help me stand because there was a lot of water in the hole. At that moment, I realized that I couldn't feel my legs."

Goncalves was rushed by ambulance to a



nearby hospital. His wife Lucia and his father, who was visiting from Portugal, were already there. By the evening, Goncalves was in bad shape. His lung had collapsed and he was having a lot of complications. His wife and father told him that he kept saying, "I can't breathe." The next morning, still lying in the same spot as when he was brought into the hospital, the family felt Goncalves wasn't getting the best treatment and decided to leave. "I was transferred to UMDNJ

because my wife's brother gave her a number of an excellent doctor there," recalls Goncalves.

That doctor was Robert Heary, MD, professor, neurosurgery, and director of the Tim Reynolds Family Spinal Cord Injury Laboratory at UMDNJ–NJMS and University Hospital. "A friend whose brother had injured his back in a construction site accident a couple of years ago recommended Dr. Heary, who performed his successful surgery," says Goncalves. "My wife contacted him right away and was told to bring me as fast as they could."

When Goncalves arrived at University Hospital, Heary told his wife and father they were going to do an MRI and would probably perform surgery the next day. The MRI showed two collapsed lungs and some broken ribs. Goncalves had sustained two spine injuries, an ASIA A level of cord injury which means he had no movement or feeling below the injury in the upper back region (T4-T5) and a severe low back injury which left him with an unstable, L3 vertebral body fracture. "I was in critical condition so they had to postpone the surgery,"

Continued on page 39

Worth a Million

FERNANDO and Lucia Goncalves established a \$1 million deferred gift to benefit the Timothy Reynolds Family Spinal Cord Injury Laboratory at NJMS, which opened in 2006 under the direction of Robert Heary, MD, NJMS professor, neurosurgery. The goal of the lab is to produce translational research that can ultimately be used in a clinical setting to benefit people like Fernando Goncalves.

The Goncalves endowment, which was established through a bequest in his will, will provide funds, in perpetuity, for this purpose.

"There are numerous planned gifts which allow you to benefit from your assets throughout your lifetime while supporting an important charitable purpose," explains Elizabeth Ketterlinus, vice president for development at the Foundation of UMDNJ.

For more information about contributing to any UMDNJ project in Newark, contact Elizabeth Ketterlinus at 973-972-2486, toll-free at 866-44-UMDNJ or email eketterlinus@njhf.org.



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To learn more about how you can leave a legacy at New Jersey Medical School and secure your financial future, or the future of a loved one, contact Elizabeth Ketterlinus, vice president for development, at (973) 679-4684 or eketterlinus@njhf.org.



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Age	Rate
65	5.3%
70	5.7%
73	6.0%
76	6.4%
80	7.1%
85	8.1%
88	8.9%



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