

New Jersey Medical School

Volume 8 Number 2 Summer 2010

pulse

University of Medicine and Dentistry of New Jersey

Lisamarie Moore

Stem Cell Scientist on the Move

HIV Blockbuster

To Cure Cancer During Pregnancy

Our Biggest Grant \$\$ Winners

Message from the Dean

In May, UMDNJ–New Jersey Medical School (NJMS) graduated its latest batch of physicians, 170 impressive individuals whom we have had the supreme honor of knowing and educating. The fruits of their hard work came this year, not only in the form of graduation, but on Thursday, March 18, when 100 percent of the 165 NJMS students who entered the National Resident Matching Program achieved post-graduate placements in residencies spread through the U.S. This was not only awe-inspiring, it was unprecedented.

But it's not just our graduates who are making names for themselves. Our faculty, staff and current students are, too.

When a powerful earthquake rocked Haiti in January, killing and seriously injuring Haitians, our faculty members from NJMS and UMDNJ–The University Hospital sprang into action. Within days, our surgeons and nurses were on medical missions in Haiti to care for the injured and to save lives.

Our students continue to make us swell with pride by carrying out NJMS's long tradition of community service. Despite their busy lives as medical students, they make time for such things as working with disabled children, volunteering their time to spruce up the Pediatric Unit of UH, and conducting "Penny Wars" to help raise money for charity.

And this year, NJMS faculty members received highly competitive NIH awards that highlight the strength of the school's biomedical research program.

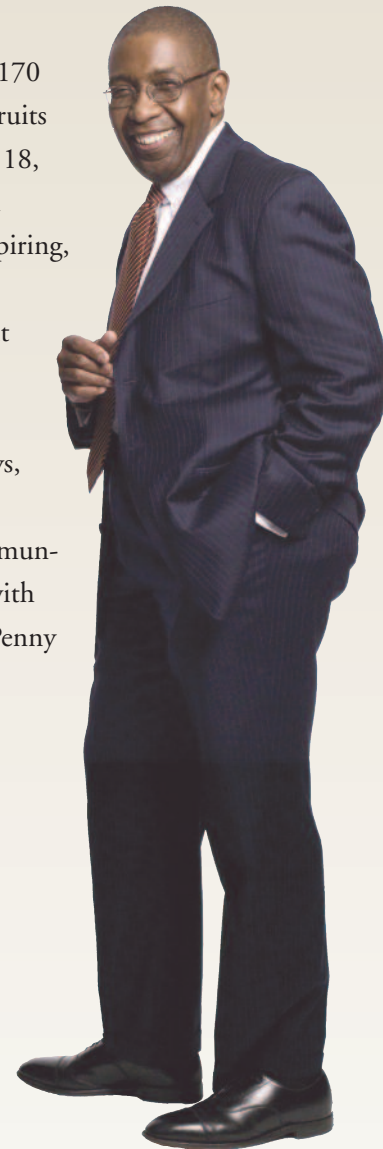
These are just some examples of the types of initiatives and achievements that take place at NJMS every day. You can read more about them in this issue of *Pulse*. See for yourself why the people who work and study here are among the finest around.

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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In Haiti



They went to Haiti last winter after the earthquake. There were 13 of our NJMS and University Hospital (UH) experts on two trips.

They started counting their patients to keep a record but soon lost track of the overwhelming numbers.

They moved faster than they ever could back home caring for the sick and dying. “No paper work needed. No registration. No consent forms. Just patient care all day long,” explains Ziad Sifri, MD, a team leader and a founder of the International Surgical Health Initiative (ISHI), which organized two missions to Haiti last winter. “Wounds were horrific.”

They carried their own critically-injured patients up and down the stairs in the Eliazar Germain Hospital outside Port-au-Prince.

They rescued an abandoned baby girl in the soccer stadium that had turned into a surgical operating field. Dehydrated, perhaps too numb to cry, she rested hauntingly in Sifri’s arms and was eventually reunited with her mother.

“It was controlled chaos,” remembers Diego Reino, MD, a surgical resident.

They met Haitians who were so appreciative that “they would give you their life,” says Haitian native Yvette Jupiter, a UH surgical scrub technologist.

They would forget to drink or eat because the pace of the work was so extremely intense.

They gave away their bedding “and anything we thought they could use,” recalls Asha Bale, MD, co-founder of ISHI and an NJMS assistant professor of surgery.

They slept on the floor at night and with constant interruption. “The physical toll was significant and made recovering for a long day of work challenging,” Sifri says.

They are haunted by little boys begging to be adopted. “I can’t stop thinking of him. Will he ever find a family?” asks Bale. ●



Thank you

- Asha Bale, MD
- Cathy Blaskewicz, APN
- Kevin Clarke, MD
- Jean Daniel Eloy, MD
- Yvette Jupiter, OR Scrub Tech
- Leonard Mason, MD
- Mona Nelson, RN
- Diego Reino, MD
- Jhoselyn Catalina Riffo, RN
- Ziad Sifri, MD
- Mae Tingson, RN
- Sue Walsh, CRNA
- Emilia Wawsczyk, RN

Top left: Ziad Sifri holding an abandoned baby; top right: Sue Walsh doing a spinal with record speed and skill; center left: Diego Reino in the “soccer” surgical field; Kevin Clarke looking for his next patient; bottom: Reino filling a syringe, with a nurse from another volunteer organization.

Carmel Wins AMA Presidency

In June, Peter W. Carmel, MD, a pediatric neurosurgeon at NJMS, was named president-elect of the American Medical Association (AMA), the nation's largest and most influential



physician organization. After a year-long term as president-elect, Carmel will assume the office of AMA president in June 2011. He is the first neurosurgeon to hold these esteemed positions. For more than 40 years as a practicing physician, Carmel has devoted his energies to improving the health of healthcare in the U.S. This step into the presidency of AMA is "an honor which everyone affiliated with UMDNJ can feel proud to celebrate," says William F. Owen, MD, University President.

For more than 20 years, Carmel has served as a member of the AMA's House of Delegates. He was president of the AMA Foundation, founding chair of the AMA's Task Force on Medical Liability Reform and chair of the AMA Task Force on Quality and Patient Safety. While he has concerns about the millions of Americans without health insurance and all the problems associated with healthcare, he remains confident about the future of medicine. As the department chair of neurological surgery, he has had a lot of contact with students. "From my perspective, the challenges they face are immense," he admits. "The motto of our medical honor society translates as 'chosen to serve the suffering.' We are fortunate in being able to serve."

Carmel is co-medical director of the Neurological Institute of New Jersey at NJMS. He currently serves as an attending neurosurgeon at The UMDNJ-University Hospital and joined UMDNJ in 1994. ●

NJMS News by the Numbers

Top 5

The UMDNJ-University Hospital ranks among the top five academic medical centers in the U.S. for treating heart failure according to a University HealthSystem Consortium report.



400

100 more than last year! Essex County high school students at the Sixth Annual Teen Forum on HIV/AIDS, sponsored by the Division of Adolescent and Young Adult Medicine (DAYAM).



79 + 13

Pairs of eyeglasses and sunglasses are collected by Student Sight Savers, thanks to SHARE volunteers Avni Shah and Lekha Ravindraraj, for the Senior Service and Hispanic Development Division of New Community Corporation and Unite for Sight.

2.2

Million dollars in new gifts for the Reynolds Family Spinal Cord Injury Laboratory at NJMS.



150+

Students and professionals at the 2010 Region IX Student National Medical Association's annual conference at NJMS.



\$28,000

Generated by 350 members of Team UMDNJ, led by UMDNJ's First Lady Alice Owen and Vice President of the Foundation of UMDNJ Elizabeth Ketterlinus, in the April 25th Susan G. Komen for the Cure. Since 2008, nearly \$50,000 has been raised for this cause by Team UMDNJ.

Justin Schleifer, MD, Ayden, and
Talya Benoff, MD



A Little Match Day Magic

For one married couple—Talya Benoff, MD, and Justin Schleifer, MD, parents of Ayden, who is just a year old—Match Day 2010 on March 18 was the culmination of a journey that began five years before. In fact, this pair celebrated back on Match Day 2009 but for another reason altogether.

They were college sweethearts who met in the honors program at Rutgers. She majored in art history; he in psychology. Just weeks after their graduation, they got married. The ceremony was put together “in haste so that my father would be able to be part of the event,” Benoff explains. Her dad, Allen Benoff, MD, a radiologist, had been diagnosed with cancer in October 2004 and died in August 2005, the month Benoff and Schleifer attended their White Coat Ceremony at NJMS, a rite of passage for new medical students.

“I was pictured in the *Star-Ledger* following that ceremony,” Benoff says. “My father was able to see the photo and watch me don my white coat and stethoscope for the first time.”

Though Benoff was a full-time medical student in the months following her father’s

death, eventually she entered into a decelerated curriculum offered to NJMS students with “out-of-school difficulties.” This delayed her graduation from medical school by a year. But one of those happy “difficulties” was that she gave birth in her third year to Ayden. In fact, “On March 19, 2009, as my peers opened their envelopes and learned their Match Day fates, my fate was delivered at 6:46 a.m. and he weighed 6 pounds, 8 ounces,” Schleifer says. Yes, Ayden was born that very day.

Though he was on track to graduate in May 2009, Schleifer put off entering the match program until 2010 so he and his wife could participate together. He used his next year to take care of their baby while Benoff finished her required rotations. In the year after graduating, Schleifer, whose father, Steven J. Schleifer, MD, is a professor of psychiatry at NJMS, also participated in suicide research at New York State Psychiatric Institute at Columbia University.

About the decision to delay his match, Schleifer explains, “As my fourth year rolled around and other students were mapping out their future, I had additional considerations. We made the careful decision to postpone the commencement of my residency for a year, so we could take these steps of our lives together.”

And when it came time to enter the Match program and apply to residencies, the couple found themselves on very familiar ground. “Five years before, we applied to medical school together and this past year, once again, we found ourselves competing for the same residency spots in psychiatry,” Benoff says.

In early summer, they were New England-bound after successfully landing residencies in psychiatry. She’s at Boston Medical Center in MA and he’s at Brown University in Providence, RI. They were among 165 classmates who won post-graduate placements in programs throughout the U.S. This year’s class had an unprecedented matching rate of 100 percent.

After learning they were heading for programs in two different states, they settled on living in Sharon, MA, located 22 miles mid-way between Boston and

Providence. “Hopefully, the commute will not be too bad with my husband driving while I’m on the commuter rail,” Benoff admits. “The two of us have been magnetically drawn to psychiatry. We share a passion for aiding those with diseased minds and troubled spirits.”

If there’s one thing life has taught them, it is to take each day as its own unique experience, says Benoff. “Personally, I entered into the world of medicine when my father was dying. Medicine and its practitioners were failing to save him,” she recalls. “I started my training thinking cynically. Conversely, I am graduating feeling energized to share myself with my future patients.” —GENENE MORRIS

“The two of us have been magnetically drawn to psychiatry. We share a passion for aiding those with diseased minds and troubled spirits.”

Pediatrics Gets a Facelift

Armed with cans of paint and art supplies purchased with proceeds from a bake sale, about 17 students along with Associate Professor of Pediatrics Beth A. Pletcher, MD, and her 15-year-old daughter, Brittany Glassberg, descended on F-blue level of UH in the spring. Their mission: to give the pediatrics unit a facelift.

“The first day, we took down all the signs and an old yellowing Aladdin poster. We painted the walls and doors a vibrant green



“The best feeling is when children pass by, point at the animals and smile,” Fowls says. “It really brightens up that part of the hospital.”

and blue,” says second-year med student Brianna Fowls, who helped coordinate the project.

Then, one of her classmates, Eugene Han, used a pencil to sketch animals and trees on the newly painted walls. Volunteers with limited artistic skills followed Han's sketch but anyone with artistic inclinations painted their own embellishments like insects, plants and animals. The jungle mural took shape over a few weeks and now features lions, owls, fish, tigers, zebras, monkeys, toucans, exotic insects, trees and all sorts of vegetation.

Fowls credits UH's Child Life Specialist Albert Perrella. “Not only did he help us get

the approvals and choose the mural's theme and location but he also gave us organizational support, providing things like a place to store the art supplies,” Fowls says.

Perhaps the most challenging part of the experience was painting the doors, she recalls. “We had to watch out for each other so that no one got slammed by an opening door. Doctors and patients' families got used to us being there and started to open the door slowly.”

“The students did an amazing job with the mural,” says Robin Wittenstein, EdD, UH's acting president and CEO. “Their efforts have gone a long way in making our pediatric patients' stay with us a little more enjoyable.”

Especially gratifying, says Fowls, is the feedback from the people for whom the mural was intended: the kids. “The best feeling is when children pass by, point at the animals and smile,” she says. “It really brightens up that part of the hospital and makes it look ‘pediatric.’” ●



LARRY FROHMAN, MD, professor, ophthalmology and visual sciences, neurology and neuroscience, is the 2010 recipient of the North American Neuro-Ophthalmology Society's Distinguished Service Award for his contributions to neuro-ophthalmology.

The New Jersey Women and AIDS Network presented **SALLY HODDER, MD**, with the 2010 Woman of Excellence Award on March 27. Hodder, vice chair of the Department of Medicine and Director of Adult AIDS programs, recently published a *New England Journal of Medicine* article describing the high HIV rates in urban America.

GILLA KAPLAN, PhD, at the Public Health Research Institute (PHRI), won an Excellence in Research Award from the Foundation of UMDNJ in May.

JESSIAN MUÑOZ and **CHRISTINE NAZARIAN** are the new co-presidents of the Latino Medical Student Association while **DIN GARCIA** is treasurer and **ABRAHAM RAMOS**, secretary.

NJMS/GSBS MD/PhD candidate **SHYAM A. PATEL**, was published in *The Journal of Immunology* in April. “Mesenchymal Stem Cells Protect Breast Cancer Cells through Regulatory T Cells: Role of Mesenchymal Stem Cell-Derived TGF-beta” was co-authored with **JUSTIN R. MEYER**, first-year NJMS student, **STEVEN J. GRECO, PhD**, a post-doc fellow, **KELLY E. CORCORAN, PhD**, **MARGARETTE BRYAN, MD**, assistant professor, medicine, and **PRANELA RAMESHWAR, PhD**, professor, medicine.

STANLEY H. WEISS, MD, professor, preventive medicine and community health, received the first CAREforAIRnj Community Outreach/Action Award, from the American Lung Association of New Jersey.



KUDOS

RYAN CHADHA and **NEIL KAUSHAL** are now president and vice president of the student council. On the executive board are **RAYMOND MALAPERO, AMANDA GANZA, RICHARD SCHMIDT, ANDREW NGUYEN, MATT MORALLE, BENSEN FAN, RYAN RAMSOOK.** New university senators are **AHMED MELEIS, THOMAS CUSACK,** and **CHRISTINE WHITE.**

Recent graduates **NADIN EXANTUS, MD,** and **ANICIA NDABAHALIYE, MD,** got Emerging Leaders Awards from the NJMS chapter of the Student National Medicine Association. UMDNJ President William F. Owen, Jr., MD, received the Visionary Award.

NJMS administrators **SHRI PATEL,** psychiatry, and **LETITIA DEAN,** Office of Research and Sponsored Programs, earned their CRAs (Certified Registered Administrator).

For the second time, NJMS student **STEPHEN ROBERTS** won the annual North Jersey Komen for the Cure run. His finish time in the 5K race was 17:36 minutes.

MONIQUE ROY, MD, professor, ophthalmology and visual science, published research on the link between high intake of calories and sodium to the progression of retinal disease among African-American patients with diabetes in the January issue of *Archives of Ophthalmology.*

AMI SHAH and **DEEPA CHERLA** will lead SHARE (Student Health Advocates for Resources and Education). On the board are **JENNIFER SHENG, AJALA OSAGIE, NEENA MAKAM** and **ANDREW NGUYEN.**

NJMS/GSBS MD/PhD candidate **RIVKA STONE** appeared on a FOX-TV and My9 News video discussing her telomere research and its link to the fountain of youth.



Win-Win

When CGC Genetics met the Institute of Genomic Medicine (IGM) at NJMS, it was a win-win situation. An 18-year-old European genetic testing company, CGC needed access to an American diagnostic laboratory with proven experience in cutting-edge clinical genetic tests. This company offers more than 1,500 clinical genetic laboratory tests in molecular diagnostics, cytogenetics, prenatal/pediatric screening,

cancer and personalized medicine. And, CGC wanted a bigger piece of the North American business. After canvassing the entire U.S., they found what they were looking for right here in Newark at IGM.

Attending the ribbon-cutting ceremony for this affiliation last April were dignitaries from near—Robert L. Johnson, MD, interim dean; Peter Toliás, PhD, professor and executive director of IGM; Newark Mayor Cory Booker; the Newark Municipal Council; Deputy Mayor of Economic and Housing Development Stefan Pryor; and Brick City Development Corporation CEO Lyneir Richardson—and far—CGC Genetics CEO Purificação Tavares, MD and Portuguese Ambassador to the United States Joao De Vallera. This CGC subsidiary is now located on Warren Street at NJIT's Enterprise Development Center, next door to the UMDNJ International Center for Public Health. The collaboration between UMDNJ–NJMS and CGC strengthens the company's capacity to create new diagnostic tests working with IGM but it also contributes to the economic revitalization of Newark. ●

Penny Wars

It was a complicated battle that pit class against class. Pennies and dollars ruled. Quarters, dimes and nickels were weapons. But the cause was a good one: to raise money for breast cancer and the Susan G. Komen for the Cure. Dubbed "Penny Wars," the fund-raiser was the brainchild of second-year students Amy Chen and Eric Levy and brought in just \$159. When combined with a bake sale on April 1, students raised \$616.26.



From March 8 to April 1, four water jugs, each representing an NJMS class, were sta-

tioned in the student lounge and classmates were asked to drop in their spare change.

Here's where the complications and war games set in: Pennies and dollar bills in a jug were worth positive points.

And because this was a war between the classes, quarters, dimes and nickels thrown into an opposing team's jug counted as negative points. For example, if a second-year student put two quarters into the first year's jug, 50 points would be lost, explains Levy. The crafty class of 2011 won this coin toss. ●

Section compiled and written by Genevieve Morris and Maryann Brinley.

A CLOSER LOOK AT CHILD'S PLAY

How rock-climbing is helping some special kids reach their “Peak Potential.”

BY KAYLYN KENDALL DINES

Unlike many of her peers, Tolulope Wisdom Adeeko was not walking by age 2. Ten years later, however, rock climbing is her favorite pastime.

As a toddler, Adeeko was diagnosed with Cerebral Palsy (CP), a neurological disorder. Determined not to rely on crutches, this sixth-grader wears a leg brace and walks with a stagger. Yet, during a 12-week adaptive rock climbing program called Peak Potential, Inc. and run by volunteers, Adeeko can step into a harness and move fiercely up a 23-foot rock wall.

This vision comes from a pediatric physiatrist who loves rock climbing. Jen Fu Cheng, MD, an NJMS alum who is now an assistant professor of physical medicine and rehabilitation at the school, founded this non-profit organization 10 years ago. The New Jersey Rock Gym, in Fairfield, donates the time and space for one hour, twice a week. There, tucked away in an unmarked room are two rock walls, outfitted specifically for children. Painted clouds are scattered about the sky blue ceiling. Facing the entrance are bright letters on the wall that read: Peak Potential. Large child-friendly hand and foot holds, some shaped like elephants and frogs, line the brown simulated mountainous rock. After going up and before descending back down towards the blue cushiony floor, climbers like Adeeko can opt to touch a yellow smiley face affixed to the top of the rock.

Safety is essential for Peak Potential staffers who must earn their certifications from the rock gym. Movements are watched and safety precautions are double checked. The harness and belay (the fastening and rope control system to which a climber is attached by metal device) help the children



Tolulope Adeeko (bottom left) climbs with (clockwise from top left) Angela Hsu, Jen Fu Cheng and Renu Cheng.

use all their extremities as they propel up the wall. There are two volunteers for every child. One is anchored on the floor holding a safety rope that is fastened to the climber.

Volunteers, as well as donations, are being accepted for Peak Potential on an ongoing basis.

The other is side-by-side with the child during the climb. A third person

anchors the adult climber.

Jen Fu Cheng believes this program helps improve quality of life, strengthens muscles and increases self-esteem for children who are physically challenged. Cheng, who is also a physician at Children's Specialized Hospital in Mountainside, says that more than 150 kids between ages 4 and 17 have completed the free program. Some children have CP. Others have missing limbs, cancer, various neurological, or orthopaedic problems. Yet, always, when they arrive at the gym, it is playtime and they're just kids.

“Go Tolulope! Alright Tolulope!” yells

Renu Cheng, a board member and pediatric physical therapist, who happens to be married to the program's founder. As one of 50 active volunteers, she is often energized by her participation, “There have been days when I walk in here exhausted and frustrated. I can come in after a long day and in less than a span of one hour, I leave feeling like a new woman. For instance, one 4-year-old boy changed me. He had a traumatic brain injury and had been through so much, but he was able to make me laugh.”

Her supportive nature touches Bunmy Adeeko, Tolulope's mother, who endures a 90-minute drive

during the height of rush-hour once a week so her daughter can spend 60 minutes climbing. She says, “Renu is enthusiastic, very passionate and she relates to the children. She smiles. It encourages me.”

Adeeko, who wants to be an attorney, is encouraged too. She was standing midway

www.peakclimb.org
renu@peakclimb.org
jenfu@peakclimb.org

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A CLOSER LOOK WHEN TALK, TRUST AND TEARS RULE

Their work days are non-stop dramas. And even when the emotion is heart-wrenching, they make it look seamless. These four members of the NJMS-University Hospital palliative care team handle death, life and absolutely everything in between. **BY JENNIFER S. DOKTORSKI**



Susan McVicker (left) offers encouragement.

In April 2010, when Harriet Williams' 67-year-old sister, Joyce, arrived at UMDNJ-University Hospital (UH) suffering from multiple, life-threatening medical conditions, it would mark her 28th hospital admission in recent months. To save Joyce Williams' life, doctors performed intubation and placed her on life support. But Harriet protested that this was not what her baby sister, Joyce, or the family really wanted.

"We knew she didn't want to be like this," Harriet explains. "We had reached the point where we were ready to let her go."

Enter Janet Harris Smith, MS, from the NJMS-UH palliative care team. Smith recalls, "I told Harriet, 'You know what, we don't have to do this.'" After Smith learned that Joyce had diabetes and a host of other debilitating medical problems, she presented

Harriet with options and helped her communicate end-of-life wishes for her sister to the attending physician.

"I didn't have to ask for anything, the support just came," Harriet remembers. "Janet was very kind, and very soothing."

This is a common scenario in their work, explains Patricia Murphy, PhD, APN, the advanced practice nurse for ethics and bereavement who leads this palliative care team. "Our team is there to be the voice of the family," says Murphy.

Murphy's group makes sure patients and families understand care goals and options. They push hospital personnel

to answer questions in the ER, intensive care, on a floor or during a family meeting. Better communication, in fact, is the ultimate and critically important goal of this palliative care team comprised of Murphy, Smith, Susan McVicker, MS, and Susanne Walther, APN.

In describing her teammates, Murphy exudes, "They're all amazing. They each have a unique perspective to bring."

McVicker and Smith are counselors with special training in end-of-life care. Walther is board-certified in palliative care and also provides education and support to residents and clinicians managing patients' pain and symptoms. They start each day over coffee in the cafeteria and from there, patients, problems and schedules send them running. Many are the times they pass each other in the elevators, hallways and nursing stations.

Murphy explains that her team meets with patients and families in crisis, often simultaneously addressing physical, emotional, psychosocial, spiritual and even existential needs, such as discussing dying patients' regrets about substance abuse issues resulting in organ failure or their desire to reconnect with long-lost family members at the end of their lives.

Walther says that sometimes the team's first contact with patients and their families is in the emergency room. From there, the patient may be moved to the intensive care unit and eventually, to a hospital floor. "We're the consistency in all of that."

McVicker believes that it's important to establish a connection and trust. "We inter-



Janet Harris Smith and Patricia Murphy

vene early with families and patients.”

“I think we are unique. Anyone who identifies a family or patient in distress can call us. We collaborate with attending physicians, residents, nurses, social workers and case managers,” says Murphy.

Members of the palliative care team evaluate patient preferences and help people complete their advance directives (living wills). They also facilitate family meetings with the primary care team; assist in breaking bad news to patients; educate families about end-of-life issues; and introduce options that might include hospice care or organ donation. Families have questions that range from: “When is it time to remove life support?” to “What do the last moments of living look like?”

“We interact with people at the most intimate moments of their lives. We pull them back to humanity,” Smith says. On the day we photographed, Smith ran straight from the cafeteria and her hot cup of coffee to the ER where a patient had been brought in after sudden death that morning. The family needed answers as well as Smith’s willingness to run interference with other members of a very busy healthcare team. Smith said the family wanted to know what caused their loved one’s death and she was able to get a doctor to explain it to them.

Moments like these can be particularly difficult and painful, especially when dealing with children, McVicker explains. Recently, she was called upon to organize a meeting for four daughters of a woman with terminal cancer. She helped the two, grown sisters deliver sad news to their younger siblings who were just 14 and 11. Their mother was not going to get better.

“Even though this work is sad, amazing things happen. We get through the pain and we know that we’re helping. This is what feeds our souls,” McVicker says.

Often, the team is dealing with end-of-life care, but not always, Murphy explains. Some of their stories have happy endings.

Take the case of Keno Shurmann, a 37-year-old German man who had flown to the U.S. on business this past spring. While on



the plane he became seriously ill, went into septic shock and nearly died. He was taken by ambulance from the airport to UH’s Emergency Department. His wife, Katji Shurmann, who had not accompanied him originally, came from Germany to be with him, leaving their two small children with family members. Katji stayed by his bedside for more than three weeks before she and her husband returned home.

Shurmann, who had *Streptococcal* toxic syndrome, was on dialysis, a ventilator, and blood pressure medication, Murphy says. At times, his prognosis did not look good.

Walther says she met with Katji and her friends daily. Katji always had at least one German friend with her. Walther facilitated

Janet Smith (left) counsels a family member; Pat Murphy (below) directs Pam Jones; Pat Murphy, Susan McVicker and Susanne Walther.



and attended family meetings with the primary medical team, reviewed information and “translated” medical jargon. While Katji speaks English, certain terms still required more explanation.

“I also assisted with the larger concepts: how long will Keno be kept alive if he does not seem to recover? When will he be ready for transportation back to Germany? What type of facility will he need?”

The palliative care team arranged for Katji to receive calls from home on the phone in intensive care so she did not have to leave her husband to use a cell phone. When it was time to return home, Walther even helped Katji find a place to buy toys to bring back to her children. Through it all, Walther said she was on hand to offer Katji “lots and lots of emotional support.”

“We don’t just care for people who are dying. We support families through crises,” Murphy says. “It’s about seeing people through the most difficult times.”

Continued on page 11

A CLOSER LOOK WHERE STUDENT DOCS PRACTICE

The Student Family Health Care Center run by teams of NJMS doctors-in-training is the oldest clinic of its kind in the U.S. Newark area residents agree: the care there is top notch. **BY JILL SPOTZ**



Among all the lecture halls, laboratories and offices at NJMS is a small doctor's office capable of handling only six to eight patients at a time. Yet, Suite 0300 in the Doctor's Office Complex (DOC) bustles with the energy of a practice much larger, especially on Tuesday and Thursday evenings starting at 5:30 pm. That's when teams of medical students, along with an attending physician, converge on this Student Family Health Care Center (SFHCC) to provide much-needed, free health care to Newark area residents. The volunteers, who have already put in long days when they arrive, provide primary care services including physical exams, EKG's, blood tests, pelvic exams and referrals to specialists. Of course, the patients benefit. But, so do the students who are fine-tuning their patient care skills.

The SFHCC, the oldest, continuously running, student-led clinic in the U.S., has been a valuable resource to the city of Newark since 1968. Created by NJMS students to provide health care to area residents after the riots, the clinic has been supporting the community ever since. The center is directed by a team of third- and fourth-year students who coordinate all administrative tasks involved in operating a clinic including organizing each night's setup, registering patients who arrive at 6 pm, ordering supplies and medications, as well as determining the process and flow of visits. They make decisions as a group with the input and assistance of an attending physician. Student director and fourth-year medical student Jason Zucker explains, "We start the evening before patients are scheduled to arrive with a presentation by a student on a relevant out-

patient medical management topic. Students are then placed in teams of five and begin to see the patients who have arrived." Since clinic space can only accommodate a small number of visitors, some groups move to UMDNJ—University Hospital (UH) for teaching sessions with their patients. Others go over to the Medical Science Building (MSB) to practice taking patient histories, conduct physicals or provide patient education—all with the assistance of upperclassmen. "The third- and fourth-year students guide the first- and second-year students through this process," Zucker says. "After the groups have finished seeing patients, they reconvene and present their findings to the attending physician to discuss plans of care." The center is fully stocked with a formulary of medications but if a medicine is unavailable, the students assist patients in obtaining prescriptions free-of-charge through a patient assistance program.

The success of any physician's office can be measured in the quality of care provided and satisfaction of patients, and the SFHCC is no different. "Thoroughness of the visit" is routinely rated a 9.4 out of 10 on patient satisfaction surveys. "Most evenings the patients and students are in the clinic until 10 o'clock or later but patients are appreciative of the meticulousness of the experience," explains Robin Schroeder, MD, assistant professor, family medicine, and faculty advisor to the SFHCC. "Our students provide comprehensive education to patients, which takes time. For example, one of our diabetic patients had tremendous difficulty managing his blood sugar. When the students discussed his diet, they found that he was eating many fruits and vegetables but not enough protein and the wrong carbohydrates. The students educated him about proper nutrition to control diabetes and in a month we saw that his blood sugar was under control. He was so excited, and the students realized that they really could make a difference."

The clinic was initially created through a grant and since then, it has been sustained through funding from the NJMS Alumni

Association and the Dean's Office. As SFHCC advisor since 2005, Schroeder knows firsthand the successes and limitations of the program. "This is a volunteer effort and faculty are already pressed for time," she explains. "We are limited by the size and space in our treatment areas as well as the staffing." Schroeder is currently seeking grant funding and alternate options for expanding SFHCC. Partnering with other UMDNJ schools to create a multidisciplinary program is an option. Taking the program out to community agency settings where the volunteers wouldn't be restricted by too few patient care rooms is another possibility. Currently, the clinic is open 50 weeks out of the year and med students provide 600 patient care visits annually.

Student directors are very involved and always searching for ways to improve the flow of the evening and the overall patient experience. Zucker initiated his own quality assurance project this past year working with a team of interested students. After reviewing a year's worth of hypertension, diabetes and preventive medicine patient care charts, they followed up with a phone survey to each patient to closely monitor the quality of care they were receiving. The goal was to develop a firsthand approach to improving the quality of the center and compare the management of these problems with other clinics. "We have been very successful in treating our hypertension and diabetes patients," Zucker explains. "But we found



Robin Schroeder, MD, and Jason Zucker

that we need to shorten the amount of time it takes for patients to receive preventive screenings such as colonoscopies after they leave our office with their referral." Students presented these findings at the Society of Student-Run Free Clinics national convention in Florida and at the Society of Teachers of Family Medicine national conference in Vancouver.

"The SFHCC is one of the reasons medical students choose NJMS," explains Schroeder. "There are very few schools that offer first- and second-year students the opportunity to care for patients." Zucker, who will be starting his internal medicine/pediatric residency this year at UH, believes the experience has prepared him to be a great physician. "I am able to see health care from the patient's perspective and find out what is important," he explains. "When you sit down with patients outside the exam room and have the time to talk about issues such as why they aren't taking their medications, you are able to see health care in a different light." ●

Child's Play

Continued from page 7

up a difficult rock course when her sister, Tosin, noticed and offered her a \$15 incentive for completing the climb.

Chuck Rouse, MD, a recent graduate of NJMS who has volunteered for three years, says, "The cool thing about Tolulope is that she's almost at the point where we like to get participants. We try to have her do specific routes, using only the yellow holds to hoist herself upwards." Volunteers hope partici-

pants will, one day, be prepared to climb in the main gym.

Adeeko reached the top. Weeks later, she smiles and admits the \$15 reward has yet to come from her 13-year-old sibling. Yet, the pre-teen doesn't seem fazed. She has shopping on her mind, in fact, and the strength that comes from rock-climbing helps. Being strong enough to walk through large department stores without getting tired is worth all her efforts. Perhaps, the money doesn't even compare to the anticipation of the next climb to the top of the rock. ●

Talk, Trust, Tears

Continued from page 9

Jeff Bellinger met Walther at UH in February 2010 during his wife Arlene's struggle with liver disease. "It always struck me how good Sue was with Arlene. Regardless of whether Arlene was lucid or confused from disease-induced encephalopathy, Sue always took the time to listen to—and talk to—Arlene," Bellinger recalls. "I started to notice that if Arlene was even a little bit confused and I was in the room, many medical professionals would talk mainly to me...making Arlene little more than a spectator. Arlene also noticed it. Sue never did this."

Eventually, Walther would be the one to break the news to Bellinger that his wife would not be a transplant candidate. "Sue befriended me at a time that was stressful, frightening and sorrowful," Bellinger recalls. "I was grateful for everything Sue did for Arlene and I appreciated that she understood that I needed to talk to a sympathetic person even though I wasn't the Bellinger who was in a hospital bed."

Working in an academic medical center gives this remarkable team the opportunity to train physicians. The students, residents and fellows they interact with go on to other hospitals. Murphy hopes that they take what they've learned about communication, pain, symptom management, and family meetings with them. "I like to think of this as being like Johnny Appleseed," Murphy says.

Tim Johnson, MD'05, says that Murphy's palliative care team experience made him a better physician. Johnson is now at North Shore-Long Island Jewish Medical Center in an emergency medicine/internal medicine/critical care triple-boarded residency program.

"I connect with people. I hug people. I guide them through the process of grieving so they can have closure instead of despair," Johnson says. "Really, breaking bad news has become one of the most rewarding experiences of these past few years, as I have been able to move past the science of the patient and focus on the patient as a person." ●

ROBERT DONNELLY

Donnelly and the Double Helix

Who are you going to call with a question, problem or project that requires expertise in DNA, RNA or molecular biology? This behind-the-scenes researcher operates his resource facility with its expensive, sophisticated technology like “a small business within the University.” He’s the guy you need. **BY EVE JACOBS**

The unfolding career of Robert Donnelly and the coming of age of molecular biology are intertwined like the archetypal image of the double-helix. Since the mid-’70s, the inside-the-cell interactions of DNA and RNA have moved front and center in the world of laboratory research, while, simultaneously, this scientist has established his professional life front and center in that world of molecular biology.

Born and raised in the snowy hills of upstate New York, and a graduate of Syracuse University, Donnelly loves the outdoors but never warmed to downhill skiing. Nevertheless, the element of unpredictability in his workday gets him up-and-out every morning and allows him to say: “I’m happy. I love my work.”

With a PhD from Wesleyan University in genetics/molecular biology, he first moved to

Lederle Laboratories for a two-year post doc in neurosciences, working on the DNA sequencing of the Alzheimer’s gene, then on to NYU, where he applied his specialty to a schizophrenia project for a year and a half, and then in 1990 to UMDNJ-Robert Wood Johnson Medical School, where his expertise in molecular biology was called upon again, this time in the lab of interferon pioneer Sidney Pestka. “Everything I have worked on is molecular biology—understanding how things work from the DNA out,” he comments.

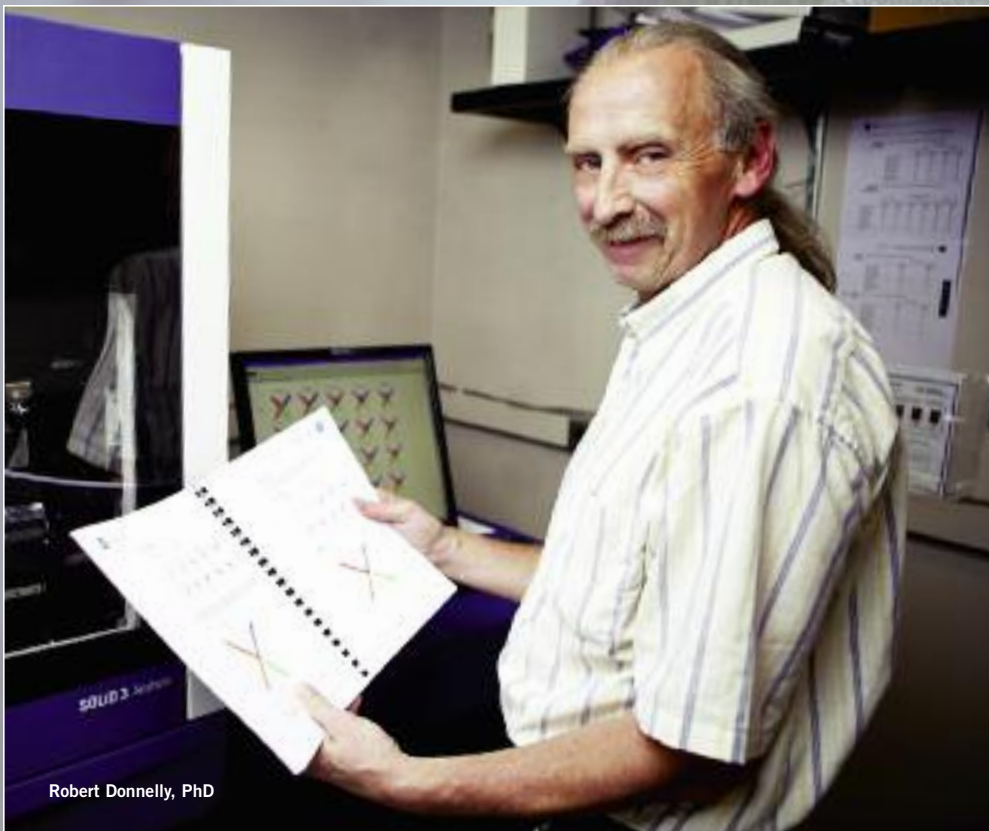
“If it’s inside the cell, I know something about it. I know a lot about DNA and RNA, what they do, how they work and the proteins associated with them,” he says. Smiling, he explains that his expertise does not extend outside the cell.

When he came to NJMS in April 1995 to be the first head of the newly-founded Molecular Resource Facility, Donnelly forecasted a five-year stay for himself—enough time to set up the operation and get it on its feet. Fifteen years later, he’s still challenged by the opportunity to learn something new every day, to teach others, and to continue constructing an A-1 scientific operation on that initial foundation. “It’s like building and running a small business within the University,” he states.

Face-to-face availability to advise and consult with other UMDNJ researchers, helping them to design and carry out experiments, is his top priority. Working with more than 200 labs, most on the University’s Newark campus, he brings to the table his expertise in DNA sequencing and DNA synthesis, and takes away new knowledge on a wide array of other scientific specialties. “I’m always learning from the other researchers,” he says.

“How to incorporate molecular biology into experiments, how to use our equipment and supplies, and how to interpret their data are what I teach them. I also trouble shoot. Are their results on track? If you’re not knowledgeable about this specialty, it would be hard to know.”

The trend right now, he explains, is to



Robert Donnelly, PhD



“Through a series of automated steps involving a slide carrier, a liquid handling station and the controller we are able to generate enough data to cover the human genome several times from a single instrument run. This major advance in DNA sequencing technology will have a significant impact on the future of research in cancer genetics, disease diagnostics and will introduce the era of ‘personalized medicine.’” — **Robert Donnelly, PhD**

use molecular biology in every aspect of biomedical research. That adds up to a lot of bench time—most of it the responsibility of just two technicians in the Resource Lab. “There’s way more work than people,” Donnelly comments.

Building a molecular resource lab from the ground up is no easy venture. While most graduate science universities and major scientific corporations have this kind of facility, they are not created equal. Most pieces of equipment cost in the \$300,000 to million range and most PCR (polymerase chain reaction—a method that rapidly produces numerous copies of a desired piece of DNA) instruments cost \$40,000 to \$50,000, putting frequent purchases out of the hands of most nonprofits and small businesses. So, grants for expensive pieces of equipment must be won and that in itself is a mighty challenge, particularly in the current financial climate.

This Molecular Resource Facility—and the NJMS Research Office, headed by William Gause, PhD, senior associate dean—have been highly successful in garnering funding for the “big stuff.” Donnelly proudly tours me past a half-million-dollar piece of equipment purchased just this past summer with a grant from the NJ Commission on Cancer Research. A \$600,000 high throughput DNA sequencer funded by a recently awarded grant from the National Institutes of

Health—due to arrive this summer—will speed the work up significantly.

“Back in the ’70s, when sequencing DNA was the new hot thing, we could do 100 to 200 bases on a sample. It was very crude by today’s standards. With the new sequencer, we will be able to do several billion,” he states.

“I want to see the new technology used in a really productive way. We’re producing huge amounts of data and are able to ask questions we couldn’t even ask before.”

With this amazingly sophisticated technology in place, 80 percent of all research projects on UMDNJ’s Newark campus, as well as small biotechnology companies around New Jersey and others as far away as Puerto Rico, find their way to this facility to use the newest equipment and consult with the man “behind the scenes.”

“I’m not good at turning anyone away. Everything is interesting to me,” he says.

“Today we’re working on an oncology project with surgical oncologist Larry Harrison,” he says. “I’m VERY interested to see where this project will go.”

Every experiment brought in here—by University faculty, post docs, grad students, undergraduates, summer students and corporate scientists—represents a learning opportunity for Donnelly. Those seeking the facility’s services, and its director’s help, get an additional benefit.

“I can be a facilitator,” he comments. “If

someone comes in saying, ‘I need to use this particular technique,’ I can put him together with someone already doing the technique. Sometimes watching someone for just one day can save months of work. Researchers here are willing to help each other. It’s a great thing.”

What does the near-future hold in store for Donnelly? Getting the new Deep Sequencers up and running to maximum potential is his primary focus. Teaching on a “small level”—one course per year, called Methods in Contemporary Molecular Biology, for a maximum of 20 Master’s and PhD students from UMDNJ–Graduate School of Biological Sciences—is also a high priority. “If you don’t train students properly, you don’t make new discoveries,” he says. “And teaching is fun.”

But perhaps what gives Robert Donnelly his greatest payback is the novel approach to science of the Molecular Resource Facility that he directs. In a school with “such a strong institutional commitment to research,” his laboratory exists to provide much-needed services to others.

“In science, each laboratory traditionally works on its own projects, competing to be the first to publish new findings,” he states. “But we have a different approach to research. We can be altruistic. We get to spend our time working for the greater good.” ●



Pranela Rameshwar, PhD

PRANELA RAMESHWAR

Mentor Extraordinaire

Meet a gifted, determined scientist who gives back to her students.

BY MARY ANN LITTELL

It's not easy being a woman in a man's world—especially in the world of science. Just ask Pranela Rameshwar.

“Women are not taken as seriously as men, particularly in the basic sciences,” she asserts. “Their accomplishments often go unrecognized. I've seen and experienced this bias and I know it exists.”

A recent report from the American Association of University Women titled “Why So Few?” supports this claim. It focused on the underrepresentation of women in science and math, stating that although women have made gains in science and math careers, gender stereotypes impede their success. They must publish more frequently and are less likely to get tenure.

“Yes, I saw the report and I agree with it,”

says Rameshwar. “There's a lot of bias in science, but I don't let it stop me from doing my work. Fortunately, the internet is the great equalizer. If you publish, you establish yourself as an authority in your field, and it doesn't matter if you're a woman.”

Rameshwar, a professor in the Department of Medicine–Hematology/Oncology at NJMS, is an expert in stem cell biology. Much of her research focuses on bone marrow stem cells, a major source of immunological response in the body. Outside the lab, she's a consummate teacher: She was inducted into UMDNJ's Master Educators' Guild in 2005 and won the NJMS Faculty of the Year Award in 2006.

Her warmth, openness and open-door policy have made her a favorite with stu-

dents. “Dr. Rameshwar is a great mentor,” says Shyam Patel, an MD/PhD student at NJMS and UMDNJ-Graduate School of Biomedical Sciences, who is doing research in her lab. “She's tremendously supportive and meets with us daily on our research. We can talk to her about anything.”

Rameshwar's road to NJMS was not an easy one, she explains in a lilting accent that's hard to place. “People guess about my background but seldom get it right. Some think I'm middle Eastern, others think I'm from India.” She's actually a native of Guyana. She trained there as a medical technologist and came to the U.S. with her young daughter in 1981. She already had an undergraduate degree, but obtained another one at the University of Wisconsin with a World Health Organization Scholarship, graduating Phi Beta Kappa with a BS in medical microbiology. “Education in Guyana was not comparable to here.”

At the time, Rameshwar intended to attend graduate school at a top U.S. university, but a difficult personal problem derailed her plans. She was required to live in New Jersey or New York.

As a mother, she needed to have good health benefits. So in 1985, she came to work at UMDNJ as a lab technician, enrolling at Rutgers-Newark as a part-time PhD student. She went to school at night, worked on weekends to pay her tuition, studied around the clock and raised her child. So many people from Guyana lived in her area that she was never at a loss for free babysitters.

Rameshwar got her PhD in biology and immunology in only 4 1/2 years. How did she do it? “I often ask myself that same question,” she muses. “I gave up everything else in my life, just focusing on work, school and my daughter. I don't tell many people this story, because I don't want them thinking, ‘Poor me.’ It was difficult, but I wouldn't trade this experience for anything.”

Rameshwar's interest in a career in science was kindled early at the University of

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PERSONALLY SPEAKING

Why So Few Women in Science?

BY KIMBERLY SILVERIO

When I arrived at UMDNJ–GSBS at NJMS in 2007 to start my Master’s program, I realized just how important interacting with strong female figures was in my making the choice to continue on in a science career. Female faculty members like Senior Associate Dean B. J. Wagner, PhD, and Professor Pranela Rameshwar, PhD, have become mentors for me. They keep me motivated and remind me to persevere in the face of adversity. These women, like so many other female professors, are inspiring. They show young, aspiring female scientists that you can balance a professional career and personal life.

“Why So Few,” a recent study published by the American Association of University Women (AAUW), shed light on the vast underrepresentation of women in science, technology, engineering, and mathematics, or what are known as the STEM fields. The study explains that not only do stereotypes exist, but cultural biases make it even more difficult for women to level the playing field, even to this day. The smallest environmental factors can influence a young woman’s desire to choose a career in science or to continue on to a higher degree. Beyond some basic biology that may give males a slight advantage due to spatial adeptness, young women with comparable skills are being influenced by faulty assumptions about their intelligence, by the lack of female mentors, and by the idea that they are not going to be able to perform as well as male counterparts.

This disparity of women in science has always been a topic very close to me. It wasn’t until college that I started to see the inequality personally. I was a biochemistry major and as I moved into my upper level physics and math courses, the number of women in my classes started to dwindle. In my third year, I clearly remember walking into a math class and being the only girl in the room. Male classmates often dominated the discussions, especially ones that required participation. In all four years of my undergraduate program at Rutgers, I encountered only one female professor in the biochemistry department. I started to feel not that I was alone, but that I was definitely one of the few.



My experience was not very different from what younger girls face today. According to the AAUW study, there has been an increase in women achieving high scores in math on standardized tests like the SATs but this doesn’t translate into a comparable increase in women’s attainment of college or graduate science degrees. Many girls leave high school armed with the same skill sets as boys for a future career in science, mathematics or engineering, but by college graduation, men outnumber women in earning bachelor’s degrees in STEM fields. An average of about one-third of all male freshmen plan to major in a STEM area compared to about 15 percent of women. And in areas like computer science, women earn only about 20 percent of the degrees.

As I read through the study, I started to reflect on how fortunate I may have been unknowingly along the way. I’ve had strong female mentors to foster my growth. The AAUW report has compelled me to look into ways we female scientists can help future generations. According to our enrollment profile, 56 percent of the GSBS student body is female.

Interestingly, across the board, UMDNJ is predominantly female with a total enrollment of 63 percent school-wide. Because outdated stereotypes and biases can greatly undermine a girl’s self-esteem, being a female mentor and reaching out to younger women could change someone’s life. As a young female research grad student, I actually have it in my hands to influence the future framework of our male-dominated field. Mentoring is just one way to help the next generation of female scientists. But, are there other steps that UMDNJ can take to shape the next generation of young women interested in science but who are afraid of being turned away from taking that step?

Write and let me know your thoughts:

silverka@umdnj.edu. ●

NJMS PEOPLE DO YOU KNOW?

CHERYL KENNEDY

“Hair, Flow It Hair, Show It”

BY EVE JACOBS

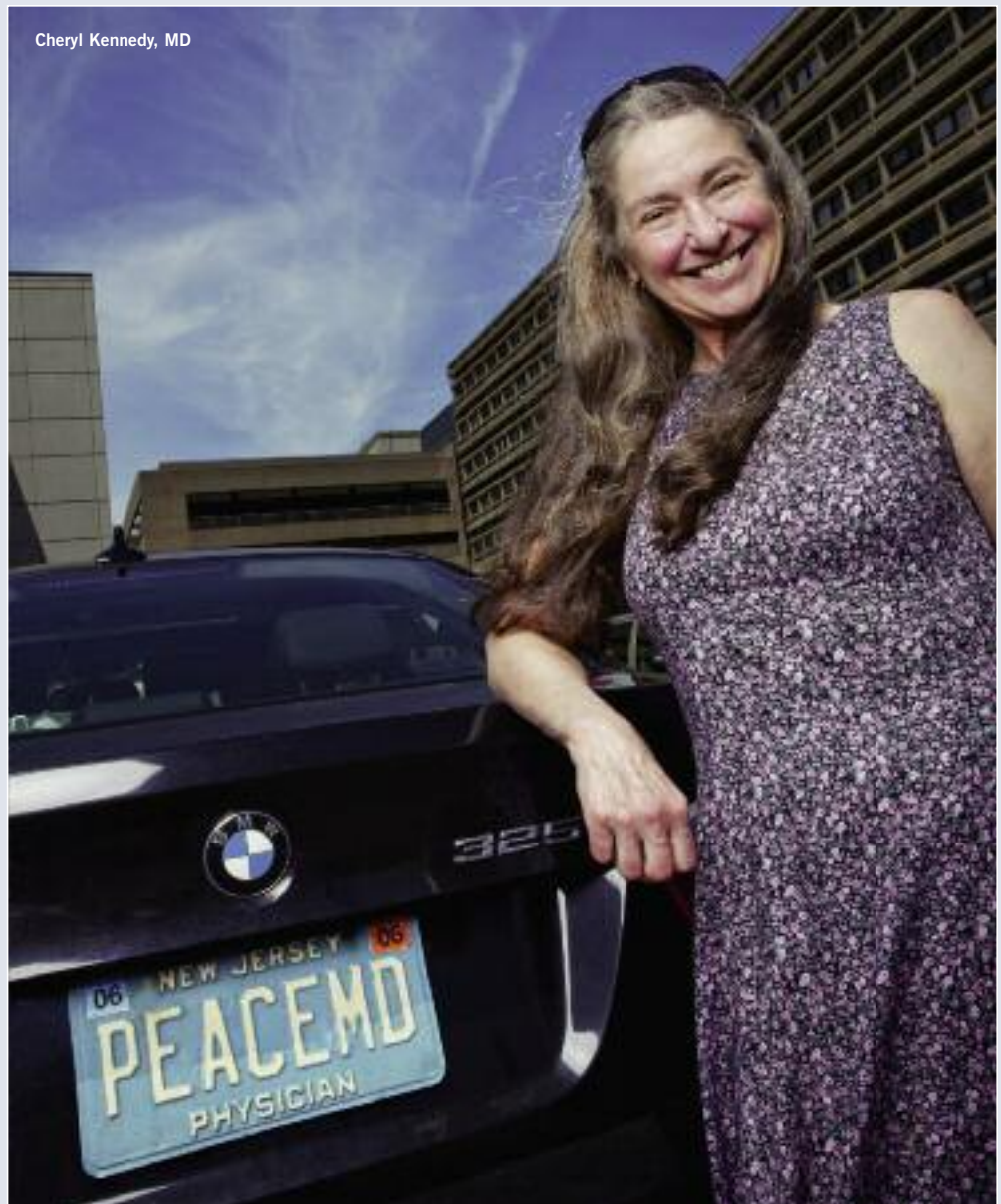
It’s “the dawning of the Age of Aquarius” and 21-year-old Cheryl Ann Kennedy, thick braid trailing down her back, takes hold of her hard-won degree from predominantly male St. Peter’s College in Jersey City and steps out and onto the anti-establishment stage. The year is 1969 and “dropping out” is all the rage. The new graduate, with husband and friends, heads off to live on a commune in New England. It’s time for these Jersey City kids to “go back to the earth” and “let the sun shine in.”

“Big things were happening in the world—it was the height of the counter-culture. I was 21 and the world felt a little dangerous. Those were happy days,” she says.

Not quite so exhilarating were her early college years, when women were only allowed in St. Peter’s night program and science-studies were only offered during the day (in other words, just for men). Majoring in English literature and history, and earning her licensure to teach high school, she simultaneously worked as an editorial assistant for *The Jersey Journal*. By her third year, the day program opened to women and she transferred in, but did not change majors.

Anti-war demonstrations and community organizing were in full swing. As an ardent “peacenik,” Kennedy counseled conscientious objectors throughout the Vietnam War.

Returning to the New York area in 1972, after several years of patching together factory jobs and waitressing, she and her husband settled in Buck’s County, PA, living with friends on their farm. She went back to school at Temple University to take the science classes required for admission to med school. “I actually knew that’s where I was headed from age 10,” she says. “I just took a roundabout way to get there.”



The patchwork path leading to her medical degree, earned at age 39, was part and parcel of that era’s view of women, and expectations surrounding their higher education and role in the society, a reality that many 20-somethings cannot even imagine, Kennedy contends. It was an important—if often frustrating—part of her personal history that helped shape the educator and psychiatrist she is today.

Perplexed by how to achieve her end goal without any funds to do so, she “decided to start the family thing going,” and at age 26 gave birth to son Ian (now a musician who works in music production and tours with big-name acts). During his infancy and toddler years, she waitressed on the 4 PM to midnight shift and continued taking cours-

es, then decided to earn a nursing degree “strictly for the knowledge”—knowing full well this was not her professional end-stop. She applied to Columbia University’s nursing program and, in 1980, became a full-time student, commuting two hours to Washington Heights, Manhattan, for classes every day, then turning around at 1 PM and “high-tailing it” down the NJ Turnpike to her 3 to 11 PM job in Bordentown, NJ, as a behavioral counselor in a correctional facility for the developmentally disabled who had committed violent or sexual crimes. She earned her BSN in ’82 at age 34.

Now came the hard(er) part. “I knew, with my checkered history, that I would not be accepted into a U.S. medical school,” she states without bitterness. After exhaustive

research into European and Mexican schools, she decided to head for the Caribbean. She was accepted into an MD program in the Dominican Republic, where, she says, her education was stellar. “My professors had all immigrated to the States when there was a big doctor shortage here. They all did American medicine and they were all Board-certified,” she says. “At 45 or 50, they all ‘retired’ to teach in their country, where they loved the way of life.”

When it came time to take the U.S. Medical Licensing Exam, or USMLE, Kennedy contends that her lecture notes were so fantastic that she never even needed review courses. During breaks between med school trimesters, Kennedy returned to the U.S. to spend three-week intervals with her family, and to moonlight for much-needed funds as a nurse on an adolescent unit in a local psychiatric hospital.

Following her first two medical school years, Kennedy transferred to the American University of the Caribbean in Montserrat, British West Indies, a school she found appealing because it sent its students to do their clinical rotations in England. The now late-30s medical student spent one year in Colchester in East Anglia, in a brand new hospital where she said the “clinical training was very good,” managing to organize her U.S. “match” by mail from there and coming back to this country for interviews. Her fourth year was spent in various visiting clerkships in Detroit and Boston.

“I really wanted to return to New Jersey,” she says. “I was matched into my first choice here at NJMS in 1987 and never left. I could not have done any of it without the support and partnership of my husband of more than 35 years, John F. Kelly, another fellow Irishman.”

With a high level of comfort walking on Newark’s streets and working in its urban health care facilities, she made this city her “second home. I wanted to be a psychiatrist and I wanted to do that here,” she emphasizes. “I was raised to give back to others.”

Ask her what she now likes best about her job, and she doesn’t hesitate. “It’s all excit-

ing,” she answers. Her routine 10- and sometimes-14-hour-days include outpatient visits, directing the third-year clerkship in psychiatry for NJMS medical students, research, mentoring, community involvement in such Newark organizations as Integrity House and New Community, departmental administrating and working in various psych services at University Hospital, including monthly weekend emergency room coverage. She specializes in complex cases, including the mental health care of patients with acute and chronic medical illnesses such as HIV, liver transplant, multiple sclerosis and Huntington’s disease. Add to that her international volunteer forays to care for women and children in Bosnia and teaching exchanges in Burma, Vietnam and

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Calling herself a globalist,
she remains dedicated to
working toward world peace
and health for all.

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the Philippines, and you can see that her plate is extraordinarily full.

With a positive energy that’s palpable and a distinctive laugh that’s highly infectious, Kennedy has been instrumental in the health and well-being of many. Students, co-workers, clients, administrators and fellow faculty members are drawn to her strong ability to connect, her no-nonsense, life-affirming instincts, her feet-to-the-ground good sense, her courage to take a stand in tough times, and her broad, worldly view.

They know she will always be there, pushing beyond her personal challenges and limitations, which include Type 1 diabetes, a mild stroke suffered two years ago (impossible to see although she says she has not completely recovered her fine motor skills and has ongoing paresthesia), and a long car ride to and from work—time to think, she says, and not a problem.

Although some of her life story was

shaped by discrimination against women, she says she is not a strident feminist—but she is strongly supportive of women. “I started life at an all girls’ academy where we had to wear socks **and** stockings. If the uniform wasn’t perfect, we got detention. We were not allowed to let our hair touch our shoulders,” she reveals. Her own tough climb to the bottom rung of the professional ladder underlies her easy camaraderie and ready-support of those who seek her out.

Calling herself a globalist, she remains dedicated to working toward world peace and health for all and says she has no regrets about her education—in three different countries and spanning three decades. “I’ve learned there is more than one way to do things. It’s a big world.” At age 62, that big world is now at her fingertips.

While *Hair*—on and off-Broadway—became a generation’s symbol of freedom and in-your-face breaking of old bonds and beliefs, so, too, Kennedy’s long hair, so boldly swinging through the NJMS hallways, has become a symbol of her independent spirit and unconventional thinking and strength. (“Not everyone thinks it looks professional,” she admits, “but it is very Irish.”)

Our interview is interrupted by a buzz from administrative assistant Dot Lemon (Kennedy’s right-hand person), reminding her that it’s time to move on to her 4 o’clock appointment. “What do you do when you have down-time?” I ask quickly, trying to hold her there another couple minutes. Gardening, indoors and out, and time spent with family, particularly 5 1/2-year old grandchild Quinn, who lives right down the road from her, rank highest on her list.

As she says good-bye, rushing down the hallway to her next stop, Kennedy turns around smiling. “Oh, and laughter really IS the best medicine,” she calls. Her now loose, gray-streaked mane swings rhythmically with her still-youthful stride as she hurries off.

Heading back to the elevators, I could swear I hear the resounding theme song from a 40-year-old musical, revived and well on Broadway: “Hair, flow it, hair, show it, hair, long as God can grow it, Hair....” ●

NJMS PEOPLE DO YOU KNOW?

THE LEEP STUDENTS

Let the Games Begin

Med students + fun & games =
happy pediatric patients

BY LISA JACOBS

Leisure Entertainment as Effective Therapy (LEEP) was launched last fall by first-year medical students led by Kevin Chou. Originally started as a club for video game aficionados, LEEP quickly became a volunteer organization aimed at putting students into patient-care environments. Kane Genser, director of LEEP's public relations and recruitment, explains, "From the beginning, we were looking for a way to make our volunteer work more productive."

"The pediatric patients get so excited to see all the toys. When one little girl saw them, she just kept hugging all of us," explains Chou, who is fascinated by the idea of creative therapy and pediatrics. Genser adds, "This is a way to take kids' minds off what is going on with their health."

LEEP's services are warmly received by all, including Albert A. Perrella, MA, the child life specialist at UMDNJ-University Hospital (UH) in the Department of Pediatrics. On a recent afternoon, Chou, Genser and volunteers Jerel Chacko and Varun Maheshwari played like children themselves with one little boy, under the watchful eye of his grandmother. "The kids love it," says Genser. "And everybody from parents to doctors and nurses appreciate what we're doing." Family members "are really happy when we come. We spend as much time talking with them as we do with the kids. They ask us about school and have medical questions sometimes. We can't render medical opinions, but we can answer some questions and reassure them without giving medical advice."

Working with LEEP has helped to reinforce the community orientation of the NJMS curriculum for Genser. "Our school does a fabulous job of educating us about the bigger picture. Originally it was the science of medicine that hooked me. I saw humans as these fabulous chemical machines," says Genser, reflecting on how his exposure to patient care has made him see "the social side to medicine. This is the reason why I am in



"This is a way to take kids' minds off what is going on with their health."

school now, and while I will go on to become a doctor. The human aspect and social responsibility are more important to me than the science."

LEEP is continuing to raise funds for new games and equipment. The group is particularly interested in adding a Nintendo Wii to the collection. To volunteer or donate, contact Genser at genserka@umdnj.edu. ●



Kevin Chou and Kane Genser

JULIE FERGUSON
AND SUSAN NELSON

Higher-Ed Editors-in-Action

This team answered a “call for editors” and put NJMS expertise on the national map.

BY DORIS CORTES-DELGADO

In 2009, the American Association of Collegiate Registrars and Admissions Officers (AACRAO) put out a “call for editors and authors.” This organization has been providing written standards in student records management for more than 50 years and there were mounting concerns about privacy and records retention. Julie Ferguson, NJMS Assistant Dean for Student Affairs/Registrar, and Susan Nelson, UMDNJ University Registrar, responded to that call and were chosen from a pool of highly accomplished professional colleagues.

The two editors reviewed chapter two, “Developing a Records Retention and Disposal System,” in the AACRAO’s Retention of Records—Guide for Retention and Disposal of Student Records (2010 update) published on January 27, 2010.

“We felt that our application to participate in the project would be viewed favorably. We have a proven, productive, working relationship. Our broad experiences are complementary and we represent the perspective of small and large institutions,” says Ferguson.

The book, a professional guide, is written for higher education officials in the fields of admissions, records, registration, enrollment services and financial aid, and is designed to help craft an effective institutional policy in compliance with federal and state law. The contact information for state records management agencies has been included. In addition, a case study was added to help readers develop a retention and disposal pol-

icy for academic department offices. According to Ferguson, the two UMDNJ experts brought “an additional layer of awareness to the recommendations.”

The 2010 update places greater emphasis on electronic records and expands recommendations regarding security, Ferguson asserts. It also broadens suggestions for record retention schedules and for the first time offers differentiated retention periods for community and technical colleges alongside four-year schools. “UMDNJ is obligated to comply not only with AACRAO best practices on record



Julie Ferguson and Susan Nelson

retention but with the NJ Department of Archives and Record Management rules.”

The group of editors presented the guide at AACRAO’s annual national conference in New

Orleans, LA. Nelson was able to attend and participate in a panel presentation. “It was a great experience,” she says. “There was lively discussion.”

The editors worked so well together that AACRAO has asked them to revise the Academic Record and Transcript Guide in time for the conference next March. ●

Mentor Extraordinaire

Continued from page 14

Wisconsin-Madison, when she took a course in immunology and loved it. “That’s when I decided to become a scientist,” she says. As she built a career in science, she became fascinated by news reports of failed bone marrow transplants for breast cancer. “Many of these women died. It taught me that breast cancer cells somehow migrate to the bone marrow, which often leads to metastasis of breast cancer. So I became focused on stem cells and breast cancer.”

Shyam Patel is one of many students who have rotated through her lab over the years. He’s just published his first article in the *Journal of Immunology*, about the mechanisms of breast cancer dormancy in bone marrow. “Shyam is an exceptional student, one of many I’ve had,” she states. Mentoring students is a favorite part of her job. She’s had great success at it, too. Over the years, five students from her lab have been selected for prestigious Howard Hughes Research Training Fellowships, which support a year of full-time biomedical research training. “That’s quite a high number,” she adds.

Perhaps her greatest contribution to the University is the creation of a series of four

graduate courses in stem cell biology. Doctoral and Master’s students apply to the program and, upon completion, receive an MS or PhD as well as a certificate in stem cell research. Rameshwar and her students developed a website for the program, (<http://njms.umdj.edu/gsbs/stemcell/index.htm>), as well as a logo: a mango-colored ribbon symbol. Rameshwar laughs when telling how then-gubernatorial candidate Jon Corzine ‘borrowed’ the symbol for display on his website without mentioning the University. “I called his office and said if they were going to use our ribbon, they must attribute it to UMDNJ,” she says.

She’s also initiated a Student Education Stem Cell Society on campus. NJMS student volunteers speak to high school students, community groups, even visitors to New Jersey’s Liberty Science Center, educating them about the importance of stem cells and the benefits of stem cell registration. “If you ever need a bone marrow transplant, you’ll be more likely to find a donor who matches if you’ve registered.

“Wouldn’t it be great to expand this program to other UMDNJ campuses and schools?” asks Rameshwar. For her, it’s all about the students. “They are such an exceptional group. Everything I do is for them.” ●



Margarette Bryan, MD, Melissa McKoy and Adryanna



TO CURE CANCER

during pregnancy

It takes a lot of strength to fight Hodgkin's disease.
But it takes even more to do it when you are pregnant.

By Maryann Brinley

Photos by Andrew Hanenberg

“**E**veryone has a dark period in his or her life. No matter what the experience may be. It could be a financial setback, maybe an illness, or something else...I look back at 2003,” says 35-year-old Melissa McKoy, “and I see steep hills and pure walls all around me. But at least there was a journey forward.”

That was the year she spent too much time as a patient at UMDNJ-University Hospital (UH). That was the year her daughter Adryanna was born.

And that was the year she made the decision to go forward with chemotherapy for cancer even though she was more than four months pregnant. This was a frightening journey for both her and her unborn child as well as her obstetrician and the UMDNJ-NJMS oncology team led by Margarette Bryan, MD. The UH counselors told her that her baby could be stillborn or malformed. “But once I made my decision, everyone was so supportive. I couldn’t have done it without them.”

Being diagnosed with cancer during pregnancy is rare—approximately 1 in 1,000 women—and according to the National Cancer Institute (NCI), in these situations oncologists must face the dilemma of how to provide therapy to the pregnant woman while minimizing the risks to the fetus. In fact, when McKoy’s cancer doctor thinks back to this dark period, Bryan recalls, “The entire time was very scary for me, Maria Cunha, APN, and my entire staff.”

McKoy was a student at New Jersey Institute of Technology (NJIT) in 2003 as well as a member of the Fifth Battalion of the Army Reserves, Civil Affairs and Psychological Operations (CAPO), based

out of Edison. “The Reserves are like an extended family to me. I joined the military in September of 1996. Their support was enormous throughout the entire experience. You can really identify your friends during bad times. Those are the people right next to you.” She had just returned from a tour of duty and was feeling very sick, with more than just the ordinary aches, pains and exhaustion that can come from being pregnant.

“What was wrong with me?” she remembers wondering. She had seen a doctor who could tell her nothing. “Misdiagnosis,” she says. Then she went to her obstetrician, Abdulla Al-Khan, MD, who was practicing at UH. “This was in July.” Her breathing was so labored that when she entered the exam room, he could immediately hear her struggle to get air. “I was in such terrible condition that I couldn’t lie on my back. Everything was swollen. The veins in my face and neck were popping out. He rushed me directly to the emergency room and I was admitted to the University Hospital directly, that day. After admission, I was transferred straight to the Intensive Care Unit. No one knew what was going on and they were hesitant about doing an X-ray because of my pregnancy.”

Bryan, a native of the West Indies whose passion is caring for cancer patients, came to NJMS in 1991 for a fellowship in hematology/oncology and stayed on. With a team of five oncologists, this assistant professor admits, “We meet patients every day with different needs, different diseases. It is a challenge.” And Melissa McKoy presented a particularly tough challenge. “She had Hodgkin’s disease, a

cancer of the lymph nodes, and she had a large mass in her chest which is how many young people present with this disease.” The mass was compressing her lungs, robbing her of breath, and engorging the veins in her chest, face and neck. It was going to be dangerous. “There are many side effects with chemotherapy. Aside from the usual nausea and vomiting, chemo can lower blood counts and put patients at risk for infections and bleeding,” Bryan explains. “Hodgkin’s patients tend to be immune-compromised.”

Ordinarily, when a diagnosis of Hodgkin’s is made, the disease is staged which involves CT (computed tomography) or PET (positron emission tomography) scans of the chest, abdomen and pelvis, and bone marrow testing. This series determines which areas of the body are affected and the stages are classified from Stage I (a single lymph node) to IV (one or more organs). Not in McKoy’s case, however. The team was unable to do any of these procedures which might have damaged the baby. A bone marrow test can also stimulate early labor. “We worried about harming the baby. Organs are still being formed early in pregnancy.” A whole host of counselors and daily discussions with the hospital’s ethics team “tried to do the right thing by McKoy and her baby,” Bryan remembers. “But I was worried the whole time.”

“I am very religious,” McKoy explains, “and my first child was a gift from God. So I told them, ‘Don’t worry about my baby. My baby will be fine. Just give me whatever treatment you can.’ It was difficult and a kind of spiritual experience for me. You have to dig deep. Believe me, you really go deep to find the extra strength that you didn’t know

existed for you.” Confident that God was taking care of her baby, she was buoyed by the support from everyone in her life. Her mother, Icylin Ellington, and sister, Sheria McKoy, stood by her as well as friends from all over including school counselors and her dean at NJIT. “My former college roommate came to the hospital and washed my feet when I couldn’t bend. I had friends stationed in Iraq who were sending me money because I couldn’t work. Checks for \$500 and \$1,000 arrived and packages of new clothes and diapers.” This single mother laughs now about being one of the few soldiers for whom care packages were coming from a war zone, not being sent to it.

According to Bryan, the best way to achieve a cure for this lymphatic cancer, one of the few which is curable, was to go with standard chemotherapy. So,

McKoy began receiving the regimen of ABVD, which entails four drugs—Adriamycin, bleomycin, vinblastine and dacarbazine—every two weeks, a course of therapy that would continue for eight months.



On Melissa McKoy’s healthcare team: (left to right) Bernabe Santos, RN, Maria Cunha, APN, Jose Kelsey Perez, RN, Pearl Casal, RN, and Carol Sammartine, RN. Not pictured: Esperanza Monsanto, RN



Gaining weight was a challenge. “Forget about food,” she says. “I couldn’t keep it down.” The cancer, the treatments, and the pregnancy itself put her in the precarious position of losing, not gaining, weight. “Dr. Bryan would tell me, ‘Melissa, you’ve got to gain weight.’” Al-Khan, her obstetrician, was also worried. After several tries at different medications to help her eat, together they settled on a medicine that was expensive, “like \$50 a pill,” she recalls, but actually helped her eat and keep food down. “Dr. Al-Khan taught me how to eat one nibble, then wait for 30 minutes before taking another bite. Eventually, my baby started to gain weight.”

At the outset of her chemotherapy, Al-Khan felt that all her baby needed to survive outside the womb was 27 weeks of pregnancy. “But when I got to that point, he said, ‘Let’s shoot for two more weeks.’ And then it was three more weeks. Even at the 30th week, he asked me to go a little further.” Al-Khan also gave McKoy steroids to help her baby’s lungs develop faster. He’d tell her, “You don’t want to have a baby who needs to go to the neonatal intensive care unit.” So, working together, she carried her unborn child all the way to her 35th week of pregnancy. The birth day began with a regular pregnancy check-up. Afterward, Al-Khan announced, “It’s time to do this. Let’s go. Right now.”

From the doctor’s office, she went straight into the delivery room at UH where she was later induced and delivered by C-section. “I missed my cancer treatment that day so the oncology team came to see me.” In fact, there were a lot of people outside the delivery room waiting. “That’s why I love that place so much,” she says, talking about UH. “This baby was theirs as well as mine.”

To the staff’s and new mother’s relief, a perfectly beautiful daughter, Adryanna, was born on November 22, 2003 (“Veteran’s Day!”), weighing 5 pounds, 4 ounces and measuring “18 inches long,” Melissa says. “She passed her Apgar test with a score of 9. It’s just a miracle.”

The first time chemotherapy was administered by the nursing staff, her oncology nurse Pearl Casal, RN, asked Maria Cunha, APN, Bryan’s office administrative nurse, to sit with her for moral support. “What Melissa didn’t realize at the time was that Pearl and I both needed to be there for our own moral support. The entire nursing staff admired her courage and determination but that first time was daunting for us.”

While she was pregnant, the drugs were delivered intravenously via a drip. “They couldn’t give me a portal because that would entail putting me under general anesthesia and Dr. Bryan didn’t want to risk it. After delivery, I got a medi-port and have the scars to show for it,” she laughs. The chemo was painful at times. “There would be a burning sensation so the nurses put ice packs over the area on my veins to cool the process.”

She was tired, but not too tired to continue on. “You know how pregnancy can be exhausting all by itself. And chemotherapy can be too. For whatever miraculous reason, I found the energy to take each day one at a time,” she says. The scariest part was the uncertainty about everything.

“Forget about food,” she says. “I couldn’t keep it down.”

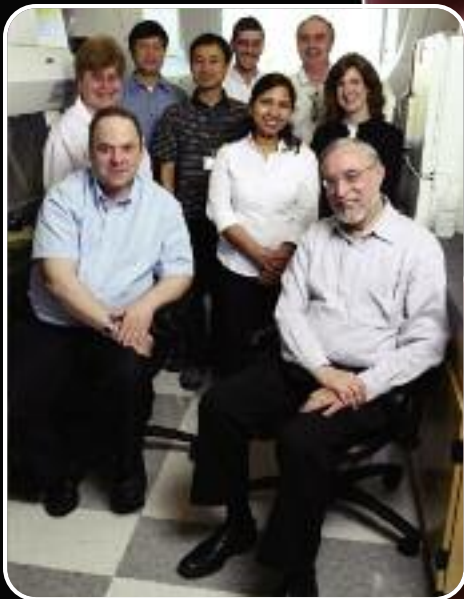
The cancer, the treatments, and the pregnancy itself put her in the precarious position of losing, not gaining, weight.

“We were very happy about this baby,” Bryan admits. “This is definitely not a situation we want to face often.”

When we caught up with McKoy, she was working in New York City for the New York City Board of Education and Adryanna was a bright, sociable kindergartner.

With her cancer in remission and her life on track, McKoy is unlikely to have a recurrence of Hodgkin’s disease but she checks in for regular follow-ups and to catch up with the staff. Now a staff sergeant in the Reserves, McKoy looks back on that birth year in awe. “My military training, my spiritual background, my support teams... all came together to help me survive.” ●

Members of the Pinter lab at NJMS, clockwise, from left: Charles Reichman, PhD, Kathy Revesz, Zhong Lai, Liangping Peng, Sholem Blobstein, Adhuna Phogat, PhD, Chavdar Krachmarov, PhD, Aidy Salomon, Abraham Pinter, PhD.



PINTER'S HIV BLOCKBUSTER

A global team led by Abraham Pinter is moving closer to an HIV/AIDS vaccine.

By Mary Ann Littell

The dream of developing a vaccine against HIV/AIDS is shared by many scientists throughout the world. That dream moves closer to reality for Abraham Pinter, PhD, of the Public Health Research Institute (PHRI) at NJMS, who recently received a five year, \$15.9 million grant from the NIH's HIV Vaccine Research and Design (HIVRAD) program to conduct research in HIV vaccine development.

Pinter is among an elite group of researchers worldwide who are studying the development of a vaccine for HIV. With this grant, he'll direct an international team of researchers from as far away as New Orleans, Los Alamos, Seattle and South Africa—all working towards this common goal. Receiving such a highly competitive grant positions the PHRI/NJMS team at the forefront of HIV/AIDS research.

"This is an exciting opportunity," says Pinter. He explains that the group's goal is to develop a new approach to producing a prophylactic, or preventive, vaccine. "Once someone is infected and the virus becomes established, it is difficult for the immune response to control the infection. But if an appropriate neutralizing antibody response can be produced by vaccinating people before they are exposed to the virus, there is a much greater chance that these antibodies will be able to block infection.

"There has been great difficulty in developing a successful vaccine for HIV, compared to other viruses," says the scientist. "Our lab has identified one important reason why. It is known that HIV mutates when it spreads, and for many years, it's been believed that the main difficulty with HIV vaccines is that such mutations rapidly lead to the loss of neutralization targets. We discovered that HIV uses a more effective method for protecting itself, which doesn't require mutations at the target sites."

Through this mechanism, called conformational masking, the virus forms a structure which covers up the antibody targets so they are no longer accessible to the antibodies. Pinter explains that many neutralization targets are in regions that the virus needs for replication, and therefore mutations at these sites may reduce the ability of the virus to spread, and thus come at a cost. Conformational masking can protect multiple targets at once, without requiring mutations at the antibody-binding sites themselves. "There may be other viruses that do this as well, but the viruses for which we do have vaccines, such as polio and influenza, don't use this mechanism."

A related discovery was that the masked structures contained a new class of neutralization targets that are actually more sensitive

to antibodies than the standard sites that have been studied for years. These new targets are present in the natural trimeric structure on the surface of the virus, but are not retained after the proteins are solubilized and purified. “Since most early antibody and vaccine studies used soluble viral proteins, this class of targets was completely missed until recently.” The realization of the importance of these new targets, called Quaternary Neutralization Epitopes, and the identification of potent monoclonal antibodies and broadly-reactive patient sera that recognize such targets, led to Pinter’s blockbuster grant.

Pinter’s lab at PHRI currently includes a core of approximately 12 researchers, and he’s in the process of recruiting additional scientists for the demanding work ahead. The grant also allowed Pinter to assemble a group of internationally respected collaborators to work on this project. “Each collaborator was selected for their ability to bring something unique to the project,” he says. For example, the South African scientists, Lynn Morris, PhD, and Carolyn Williamson, PhD, have done important work in identifying HIV patients with this type of antibody response. One of their studies monitors people who are at high risk to infection by HIV. “This team is actually trying to find the uninfected person right about the time they become infected. This allows scientists to carefully characterize the evolution of the virus—to see how the virus mutates and how this leads to changes in the antibody response,” explains Pinter. “That’s difficult to do in this country, where treatment with anti-viral drugs is standard and the rate of infection is much lower.” Another collaborator, Shiu-Lok Hu, PhD, studies how chimeric viruses called SHIVs (formed between HIV and a related monkey virus known as SIV, Simian Immunodeficiency Virus) infect monkeys and cause an AIDS-like disease. A critical aspect of the grant will involve inserting the new vaccine targets into SHIVs and testing the immune response in animals.

Pinter, a life-long native of Brooklyn, spent the early part of his career working with murine and feline leukemia viruses at New York’s Memorial Sloan-Kettering Cancer Center. “These animal retroviruses were important tools for studying cancer, but were not responsible for diseases in humans. In the early eighties, when scientists discovered HIV, it quickly became clear that these were related to the retroviruses and when we moved to PHRI in 1985 we switched our major focus to this new virus.”

Meet the Collaborators

A list of Pinter’s collaborators reads like a global “Who’s Who” in the world of HIV/AIDS research. The list includes researchers at the Wits Health Consortium in South Africa, the University of Washington in Seattle, Tulane University in New Orleans, and the Los Alamos National Laboratory in New Mexico.

At NJMS/PHRI:

Aymeric deParseval, PhD, head of the molecular biology core

Chavdar Krachmarov, PhD, head of the viral immunology core

Outside collaborators include:

Lynn Morris, PhD, chief specialist scientist and head of the AIDS Unit at the National Institute for Communicable Diseases (NICD) in Johannesburg

Carolyn Williamson, PhD, associate professor in the Division of Medical Virology, Institute for Infectious Diseases and Molecular Medicine, University of Cape Town Health Sciences Faculty

Shiu-Lok Hu, PhD, professor of pharmaceuticals and microbiology at the University of Washington and Head of the AIDS-Related Research Core at the Washington National Primate Research Center

James Robinson, MD, professor of pediatrics, Division of Infectious Diseases, at Tulane University School of Medicine

Gnana Gnanakaran, PhD, staff member in the Theoretical Biology and Biophysics Group at the Los Alamos National Laboratory

In 2002, PHRI became part of UMDNJ and the group moved to New Jersey to continue the work. “The merger has worked out well for us,” Pinter says. “We have the advantages of being in a state-of-the-art building, along with access to excellent NJMS facilities and the stability associated with a large university.”

Managing his PHRI research group, and now the collaborations, is enormously challenging. “I’ve known many of our collaborators from their published work and from scientific meetings,” he says. “When I became aware that we were looking at similar targets, I initiated collaborations with these scientists, and this naturally led to the combined grant application.” The group communicates regularly through emails and monthly teleconferences, and their first face-to-face meeting in New Jersey, at PHRI, was held in July. Now that they’re officially a team, Pinter hopes to be able to generate rapid progress towards developing the potential of this new approach. “To be able to work with all these outstanding scientists is a tremendous advantage,” says Pinter. “I hope that this grant will enable us to understand these new targets better, and to learn how to efficiently induce these types of antibodies by immunization. The overall goal of these efforts is to come up with a vaccine product that can be tested in humans, and hopefully produce a protective antibody response.” ●

MENOPAUSE and the BRAIN

Why Laura Goldsmith and Gerson Weiss
could be writing the final, critical chapter of
The Feminine Mystique.

By Joni Scanlon

When Betty Friedan's groundbreaking novel, *The Feminine Mystique*, arrived in 1963, public reaction fell into two distinct camps: shock and awe.

Many women were relieved to witness at last a public discourse on female sexuality. Others, both male and female, believed this was a conversation that belonged firmly behind the bedroom door.

Without a doubt, however, Friedan's book ushered in the second wave of the women's movement—and with it, a sexual revolution. Female sexuality had emerged from beneath the covers. Suddenly, a plethora of self-help books on healthy sex and the corresponding topic of human reproduction emerged as best-sellers—as did works of both literary and pulp erotica.

At universities and research laboratories around the world, the exploration into sexuality, fertility, child-bearing and childbirth complications mushroomed, along with grant funding for these areas of inquiry.

Yet until recently, the pool of knowledge about what happens as women approach the end of their reproductive cycles—perimenopause and menopause—remained an enigma, even among those in the medical profession.



As they approached 50, women of the generation that embraced the sexual revolution barely understood what was happening to their own bodies (the hot flashes, sleeplessness, mood swings and other symptoms associated with menopause), what earlier generations of women mysteriously alluded to as “the change of life.” Worse still, doctors knew only slightly more than their patients did.

Fortunately, more information started to emerge about menopause by the mid-1990s, thanks in large part to NJMS researchers Laura Goldsmith, PhD, and Gerson Weiss, MD.

In 1995, the National Institutes of Health (NIH) took a much greater interest in women’s midlife health, reproductive health and especially perimenopause and menopause.

For the two prominent, long-time researchers at NJMS, significant grants from the NIH extended the hormone-fertility nexus research they had already been involved in to include a deeper exploration into what happens inside a woman’s body at midlife.

This began when Weiss, professor and chair, Department of Obstetrics, Gynecology and Women’s Health, successfully competed for and was selected to be principal investigator of the NIH’s multisite, longitudinal “Study of Women’s Health Across the Nation” (SWAN) at NJMS.

The breakthrough program established seven university clinical sites in the nation, including the one at NJMS led by Weiss, to investigate the factors that influence the health of women as they experience menopause. Goldsmith, also a professor of obstetrics, gynecology and women’s health, as well as an associate professor of biochemistry and molecular biology at NJMS, later joined the study.

In 2004, *The Journal of the American Medical Association (JAMA)* published the SWAN researchers’ major findings. A seminal study, it shattered the long-held belief that menopause originates solely in the ovaries when a female’s supply of eggs is depleted. The researchers found, instead,

that menopause occurs as much in the brain as in the ovaries. It was a significant discovery in women’s health that threw open the doors to further research on a long overlooked topic. Others have been following their research path since then.

SWAN received widespread press coverage and generated as much interest as Friedan’s book probably had four decades earlier. “This was an important new concept,” Goldsmith says. “Menopause doesn’t just originate in the ovary, but also in the brain.” Among their principal findings, these researchers discovered that in some women, the hypothalamus and pituitary gland stop reacting as they should to estrogen. That is, they experience decreased sensitivity to estrogen—and this sets off the bodily reaction known as perimenopause.

As they approached 50, women of the generation that embraced the sexual revolution barely understood what was happening to their own bodies—the hot flashes, sleeplessness, mood swings and other symptoms associated with menopause.

The study involved more than 3,300 women between 42 and 52. This group was broken up into a smaller segment of 840 women who provided daily urine samples for hormonal testing during a full menstrual cycle or 50 days, whichever applied. Of this smaller subset, the researchers found that 160 women did not ovulate at all.

Further inquiry allowed the researchers to categorize the 160 non-ovulators into three groups. The first group experienced a rise in estrogen release followed by an increase of luteinizing hormone (LH)—which normally triggers ovulation but, in this case, didn’t.

The second group experienced the same rise in estrogen, but not the increase in LH. In other words, for them, the hypothalamus and pituitary gland did not respond to the increase in estrogen.

Finally, the third and largest group of women did not experience either a rise in estrogen or a surge of LH release, but recorded significantly higher continuous levels of LH throughout their cycle than did the women in the first two groups.

These findings were significant because they demonstrated for the first time, according to Weiss, “clear evidence that the brain is not responding to hormones” associated with ovulation.





Laura Goldsmith, PhD, and Gerson Weiss, MD

In addition, another important finding was that women in the third group experienced the most severe symptoms of perimenopause. As for those symptoms, Weiss predicted that the research findings might help doctors discern which type of menopause a patient might experience and thus develop appropriate treatments—as has indeed proven true over time.

These NJMS researchers are still actively exploring the entire spectrum of the reproductive cycle. And they are still making headlines. Google this topic and because of its significance, the work often appears as if the original paper had been published just yesterday.

Weiss, who received his medical degree from New York University (NYU) in 1964, is routinely listed as one of the New York Metro Area's "Top Doctors" nominated by a number of organizations and publications. He most recently earned that distinction from both Castle Connolly, a healthcare research organization that provides health information to consumers, and *New York Magazine*. A fertility specialist, he is adored by numerous parents who can thank him for their bundles of joy.

Goldsmith, who arrived at NJMS in 1986 not long after receiving a PhD from NYU and completing a postdoctoral fellowship in endocrine physiology at the University of Pittsburgh, has had the

satisfaction of mentoring a long list of protégés. Indeed, she has trained more than 45 pre-doctoral and postdoctoral students, fellows and residents. In 2009, she received an Association of Professors of Gynecology and Obstetrics (APGO) annual Excellence in Teaching Award.

Both she and Weiss continue their important research on menopause, which is now the subject of multitudes of studies around the globe, thanks, in part, to their pioneering SWAN research.

Lately, Goldsmith has been examining the effects of menopause on women of color. So far research findings suggest that these women, in particular, experience more severe symptoms than do other women in their age cohort. And, both Weiss and Goldsmith are currently looking into the role of the peptide hormone relaxin, which was discovered first in Weiss' lab three decades ago. This hormone, known to exist in laboratory animals, is also found in humans – both male and female. Though the significance of relaxin is not well understood yet, there is some suggestion that it may play a role in triggering actual childbirth, another of life's long-held mysteries—but it is too soon to tell.

One thing is certain, however. As they progress in their work, this dynamic research duo may still surprise the medical community with yet another startling discovery. ●



Bleep! Bleep! Bleep!

6:45 AM Lisamarie Moore starts her day by rolling over and hitting the snooze button on her alarm. Then again, she can use the rest.

7:15 am Moore, a PhD candidate at UMDNJ-Graduate School of Biomedical Sciences (GSBS), is out of bed and preparing breakfast. By 8 am, she and Wynter, her 8-year-old daughter, are on their way to school. Moore drops off Wynter and then hits the gym (30 minutes of cardio, 30 minutes of weights). Time to head to the lab.

Biomedical research wasn't Moore's first calling. A Queens native, she attended Old Dominion University, in Norfolk, VA, where she received a bachelor's in business administration, with a concentration in information technology. After jobs with Yahoo! and Mercedes-Benz, she returned to the New Jersey Institute of Technology (NJIT) with a plan to pursue her master's degree in computer engineering. While flipping through the graduate studies book, she happened upon a program in biomedical engineering at UMDNJ-GSBS. "I have a masters from NJIT and studied part time at UMDNJ while completing the masters. Then, I enrolled at UMDNJ as a PhD student. I had always liked biology," she says, "but I didn't want to be a physician." That was five years ago. She hasn't looked back since.

10 am Moore begins each morning by looking over her notes from the day before and then double-checking her plan for the day ahead. Around 10:30, she'll go upstairs to the vivarium to breed rats. (Who knew the life of a PhD student could be so glamorous?) Rodents are essential to her work, and one of Moore's duties is to play cupid.

After serenading the lucky duo—Barry White is a popular favorite—Moore collects any new pups from her previous love con-

nections and goes back downstairs to the lab. "It's a sad part of my job," she says. "But I have to sacrifice them to get their stem cells." The pups

are euthanized, and then dissection will take roughly half an hour.

11:30 AM A time of day when—let's be honest—most people are just finishing their email. For Moore, however, it's time to process the brain tissue she's collected. Two steps—enzymatic digestion and chemical mechanical dissociation—cleave the bonds between the cells, which allows Moore to break apart the tissue into single cells. The process takes about 60 minutes, time which Moore uses not to grab a cup of coffee (she seldom touches the stuff), but to make the culture medium into which these stem cells will be grown. Afterward, they'll go into an incubator for the next 7 to 10 days.

12:45 PM Lunch time. Or, for Moore, time to attend a seminar during which one of her fellow students will give a presentation on their work—anything ranging from immunology to breast cancer research. She cuts through the cafeteria on the way from her lab in the NJMS-University Hospital Cancer Center to the Medical Sciences Building. Usually, she'll grab a turkey and Swiss or some sushi. ("Anything I can eat without a fork.")

2:15 PM After the seminar—and assuming she doesn't have a class to T.A. (teacher assistant), or a meeting of the Stem Cell Education Society (of which she's vice-president)—Moore will head back to her lab to begin a Western Blot (or Western, for short), an assay that removes proteins from cells and tissues. She begins by taking cells from a minus-80



degree Celsius freezer, where they've been, thawing them, and breaking them apart. The Western, which requires literally dozens of steps, will take the rest of the afternoon and continue into the following morning. While it progresses, Moore takes the opportunity to put cells from another experiment on glass slides, retrieve still others from the incubator, and explain the day's work to a rotating master's-level student in the lab. As a PhD candidate, that's part of her job.

4:30 PM Moore's day is winding down, kind of. It's time to write up the results of the day's work, do some data analysis, and check out the relevant literature online. She'll also make a plan for tomorrow. By 5:30, she's in her car and on her way to pick up Wynter who (perhaps not surprisingly) has a schedule of her own affixed to her bedroom door.

6:30 PM Wynter does her homework, and Moore begins preparing dinner. While it cooks, she'll log back on the computer to finish her day's work from the lab. Her studies completed, Wynter practices piano, and then reports on her "Mommy Assignment"—a kind of special homework of her mother's own devising. It could be anything from reading and analyzing a short story, to looking up vocabulary words, to doing an extra page of math problems. Mother and daughter go over the Mommy Assignment together before they eat.

9 PM Bedtime for Wynter. Moore, however, will be up a few more hours, working, answering email, or, she sheepishly admits, sometimes even watching "Survivor." Around midnight, her head finally hits the pillow. That alarm is less than 7 hours away. ●

A Day in the Life of Lisamarie Moore

By Tryon Baldwin

Photos by Andrew Hanenberg

THE BIGGEST

NJMS got a healthy dose of NIH funding. By Jill Spatz

Thanks to the American Recovery & Reinvestment Act (ARRA) of 2009 enacted by Congress, \$21 billion was provided to major universities for scientific research and development, laboratory equipment purchases, and construction projects. At NJMS, where 51 of these National Institutes of Health (NIH) grants, totaling \$31 million, were awarded, labs are bustling, additional staff has been hired and major renovations to existing laboratories will soon house researchers who are busier than ever. This funding is helping to solve a range of problems: everything from preserving vision in patients with eye injuries, to developing a rapid surveillance system that will determine the status of drug-resistant tuberculosis around the world.

NJMS is no stranger to outside funding and current NIH awards already include \$78 million from 200 grants but the stimulus package could not have come at a better time. “This boost in funding impacts our research efforts exponentially,” explains Gwendolyn Mahon,

Many submissions were for multi-investigator projects, and in some cases, numerous faculty worked together to develop one competitive proposal. Theresa Policastro, program administrator in the Research Office, played a central role, working with investigators from the moment an idea was conceived to final stages of submission. Policastro handled everything from setting up initial meetings, bringing together investigators, and providing administrative support, to assembling the proposal. At times, her juggling act included as many as five or six multi-investigator teams simultaneously.

The Research Office itself coordinated the submission process which included the presentations to faculty, setting internal deadlines, creating budgets, organizing supplemental information, and submitting all 180 grants. According to William Gause, PhD, Senior Associate Dean of Research, “It was an incredible effort on the part of the faculty, the administrative staff in all the departments and centers, as well as the Research Office.”

DAVID ALLAND \$ VIVIAN M. BELLOFATTO \$ BHARAT BISWAL \$ YURI BUSHKIN \$ SYLVIA CHRISTAKOS \$ ARRY DIEUDONNE \$ DAVID DUBNAU
PATRICIA A. FITZGERALD-BOCARSLY \$ LAWRENCE D. GASPER \$ SALLY L. HODDER \$ ROGER W. HOWELL \$ MIR Z. HUMAYUN \$ MARK S. JOHNSON
ROBERT L. JOHNSON \$ SERGEI V. KOTENKO \$ SAMUEL J. LEBOVICH \$ DAVID LUKAC \$ LEONARD MEGGS \$ VIRGIL MURESAN \$ JAMES M. OLESKE
DEBKUMAR PAIN \$ VIRENDRA N. PANDEY \$ DAVID S. PERLIN \$ ABRAHAM PINTER \$ VANESSA ROUTH \$ MONIQUE S. ROY \$ JUNICHI SADOSHIMA
PADMINI SALGAME \$ BRUCE A. SCHARF \$ LANBO SHI \$ ISSAR SMITH \$ PATRICIA SOTERPOULOS \$ KATSUNORI SUGIMOTO \$ CAROLYN SUZUKI
ANDREW P. THOMAS \$ BIN TIAN \$ ELLEN TOWNES-ANDERSON \$ TERESA WOOD \$ LIN YAN \$ GEORGE S. YAP

PhD, assistant dean for research administration. “Faculty members are now able to jumpstart stalled projects through bridge funding and to purchase new equipment to streamline their work. The benefits encompass more than the just the research itself since funding has also allowed faculty to hire graduate students, post-doctoral fellows and technician scientists. A total of 30 new jobs have been created at NJMS and an additional 27 positions were retained so far as a result of ARRA grant funding.”

In February 2009, when Congress passed ARRA, Mahon was thrilled to hear that research dollars would be available to those who could pass the rigorous grant application and review process. She is the director of the Office of Research and Sponsored Programs (ORSP), the central location for all grant applications submitted by NJMS. “The deadline was announced and we had only three months to help organize 180 applications,” she explains. “It was an exciting time for ORSP and I am so proud of our faculty and staff’s success!”

Then came a really difficult part: the wait.

It was all worth it. Gause explains, “Because of the highly competitive nature of the grant review process, there was no guarantee that any of these applications would be funded, but in this case our hard work really paid off. An essential ingredient was the high caliber of our faculty and their strong track records in achieving biomedical grant funding.” NJMS is now ranked highest in the state for research funding from ARRA, ahead of Princeton University. Of the \$31 million, \$15 million went to a renovation and construction grant for updating and improving the medical school research facilities. NJMS is one of only two schools in New Jersey to receive this highly competitive funding. The remaining grants support individual programs, training, summer research opportunities for students, equipment, supplements to existing grants for job retention, bridge awards for investigators who need to survive a gap in funding and challenge grants for projects identified by the NIH.

WINNERS

Here are some of the biggest winners:

To Diagnose Drug Resistant Tuberculosis

The recipient of a challenge grant, David Alland, MD, professor, medicine, and chief of the Division of Infectious Diseases, received \$500,000 to develop a system to rapidly diagnose tuberculosis in two ways: a centralized approach, using world-wide surveillance, or by a patient's bedside. He is one of only 200 researchers to have won this distinctive challenge grant. His research will allow physicians to choose more effective treatments for each tuberculosis patient, with the hope of reducing the spread of the deadly disease. Alland is also automating parts of his lab using robots thanks to a \$100,000 equipment supplement. In addition, a \$390,000, two-year grant will allow him to develop a method to identify all bacteria directly from a blood sample.

Two of Alland's colleagues in the Center for Emerging Pathogens—Padmini Salgame, PhD, professor, medicine, and Director of the Graduate Medical Research Program; and Sally Hodder, MD, professor, medicine, also received significant ARRA funding. Salgame is studying the immune response to tuberculosis with a \$384,400 grant that will ultimately enhance the effectiveness of vaccines against the disease. Hodder's \$1.2 million will be used to research AIDS medications.

To Preserve Vision

For Ellen Townes-Anderson, PhD, professor, neurology and neurosciences, it is all about the eye. Her \$692,480 grant will impact the future of sight for patients who acquire eye diseases or injuries like retinal detachment. "We study the biology of the synapses in the eye, why they disconnect or regenerate, and what we can do to fix them," she explains. Her second \$38,000 equipment grant is for research involving computer chips.

To Treat Toxoplasmosis

For George Yap, PhD, associate professor, medicine, \$780,000 came from both bridge funding and a new grant that allows him to continue one of his most important projects: how T-cells are programmed by toxoplasmosis infection. This double shot of money let Yap resurrect important research by supporting his work for two years, allowing him to double the size of his laboratory and hire additional staff. "I could not have asked for a better turn of events," he says. ●



A Message from the President



Back Home from Exploring “New Worlds”

I became quite ill at the end of October 2009 and spent three weeks with what has now been confirmed as H1N1 flu. I would not have survived if it weren't for decisions made by my wife, Barbara, and the support of my good friend, Tom Denny. Tom called Dr. Tony Fauci at the NIH who recommended the best hospital and care providers in Washington, DC: George Washington University Hospital (GWUH) and their team of specialists. Good fortune was especially on my side when the ambulance took me to GWUH because it was the closest hospital, not because I had requested it. With the loving concern and presence of family and friends, along with the help of my administrative assistant, Sondra Bell, who kept the lines of communication open between my private and work life, I began to get better. At this point in time, I've made a miraculous and almost complete recovery.

Here's the dramatic backdrop to my story. By mutual agreement, I usually go alone to meetings of the Chronic Fatigue Immunodeficiency Syndrome (CFIDS) Advisory Panel to the Health and Human Services (HHS) secretary. I

spend three days, three times a year, preparing recommendations to the secretariat regarding the epidemiology and clinical management of this illness. As chair of the panel, I'm required to include working lunches and dinner meetings that usually preclude any free time. Because of this, my wife, Barbara, doesn't ordinarily accompany me. This time, however, was going to be an exception because our son, Jim, is a hard-working chief of staff to President Obama's legislative group. Jim has an office in the West Wing of the White House so we made plans to visit him and our daughter-in-law.

We were at the hotel, getting ready for sight-seeing at the Old Soldiers' Home National Park when I felt vague abdominal pain and called my doctor, Erwin Goldfarb, in Newark. He recommended that I visit an emergency room there in Washington. I told him that I'd rather take an earlier Amtrak train home and meet him at his hospital back in Newark. Then Barbara got on the phone with Erwin and agreed with him that I needed help right then. Though I was unsteady, I really didn't want to be embarrassed unnecessarily by calling an ambulance. This was

to be my last recollection. In fact, when the ambulance got there, I was in early shock from hemorrhage into my lungs. I required intubation as soon as I arrived in the emergency room at GWUH and would have never survived the train ride home. I also know that if Barbara hadn't been there, I would have gotten on that train!

It was almost three weeks before I was able to be extubated. My only recollections of events during that time—when the Yankees won the American League Championship and World Series, and the New York Giants went from a 5-0 record to a 5-5 record—were in the details of a dream I had about being a volunteer astronaut on a 100-year, deep-space mission. I remember vivid details of the planned exploration and was undergoing cryopreservation while waving goodbye to my wife and family. I recall the difficulty the crew had starting the intravenous infusion in my left arm for cryopreservation. It was only after I was extubated for 24 hours that I became aware that I was not an astronaut but in a hospital and had been there for three weeks with a central IV line, precariously held in my left arm.

Initially, my family feared, and doctors believed, that I might not fully recover and would require prolonged rehabilitation. However, because of the care I received, the love of my wife, family and friends, the response of a gracious God who heard the prayers and thoughts of everyone, I pulled through. I've returned to family, friends and especially my work caring for children with threatening, life-limiting illnesses. What I experienced in small measure during my illness has made me even more committed to developing the Circle of Life Children's Center (COLCC), a non-profit organization founded to improve the lives of children and families who need palliative and supportive care during what may be a short, painful life.

JAMES OLESKE, MD '71, MPH
PRESIDENT, NJMS ALUMNI ASSOCIATION
MEDICAL DIRECTOR, COLCC
(WWW.CIRCLEOFLIFENJ.ORG)

Happy Reunion!

For three days in May, starting early on the 14th on campus and continuing right through to the goodbye brunch on the 16th at the Sheraton Parsippany Hotel (where they had dined and danced away the night before), members of the NJMS classes of '60 (Golden), '85 (Silver), '65, '70, '95, and '05 reveled in meeting and greeting their old classmates. More than half of that '60 class attended. Current NJMS student Melissa Appio '13 (right [1], with Barbara Nahas, MD'81) reports, "I sat with three members of the class of 1960 who were in the same anatomy group and it was amazing to see how after 50 years, the bonds they had made were still going strong." Ryan Chadha '13 "was awestruck by the alumni surrounding me. On one side was Dr. Ben Levy, the nephrologist and pharmacologist who worked on creating Interferon. Sitting with pioneers of medicine was something I never fathomed." Emails, photos, and telephone thank-you's poured into Dianne Mink's Alumni Affairs office for weeks afterward. ●



SAVE THESE DATES

August 12
White Coat Ceremony
4 pm • NJMS Courtyard

September 23
Alumni Association–NJMS Board of Trustees Meeting
Rosemary Gellene Room, MSB 6 pm

September 27 & 28
Symposium: "Inflammation, Immunity and Infectious Disease"

A University-wide event to stimulate new ideas and collaborations, to be held on the Newark campus, featuring UMDNJ experts from NJMS, RWJMS, SOM and NJDS as well as distinguished speakers from Columbia and Rockefeller University. Free admission for UMDNJ employees. Information will be available on a website for registration and abstract submission for poster presentations. Under the direction of William Gause, PhD, NJMS, and Barbara Greenberg, PhD, NJDS.



2 Debra and Dr. Patrick Abiuso, Miriam and Dr. Michael Petruschak'75, Joseph Morales'75, and Dominique French

3 L to r: Drs. James Oleske'71 and Benjamin Levy'60

4 Dr. Philip Scaduto'83, Ms. Anna Marie Andrews, Dr. Joseph Boyle'60, Glenn Lambert'60 and Mrs. Ginger Lambert

5 Drs. Robert L. Johnson'72 and Roger Cracco'60

6 Drs. Abiuso and Morales checking out the old yearbook

7 Distinguished Professor Dr. Francis Chinard, his daughter Mrs. Jeanne Mullen, and Dr. William Owen, Jr., UMDNJ President



ELIZABETH ALGER, MD'64

All the Right “Intrapreneurial” Stuff

By Lisa Jacobs

It was not until 1992 that the term “intrapreneur” was added to the American Heritage Dictionary to describe employees who blaze new trails within large organizations through risk-taking and innovation. Elizabeth Alger, MD, FACP, was acting as an intrapreneur at NJMS long before the term was coined. Her success in driving innova-

tion during her 38 years on the NJMS faculty, and particularly during the 20 years she was Associate Dean and then Acting Senior Dean for Education, is responsible for much of the shape of NJMS’s curriculum today, including the use of problem-based learning and standardized patients. This past May, she was honored with the Distinguished

Alumnus Award from the NJMS Alumni Association at convocation.

“Every since I can remember, I thought about teaching,” recalls Alger, who regards medical education as her lifetime profession, more of a calling than a job. She grew up when there was little opportunity for women, but through the support of her father, who encouraged her rejection of dolls in favor of woodworking, and her natural academic aptitude, she resisted the social forces that pushed women to nursing and men to medicine. She remembers outperforming peers in high school and thinking, “Wait a minute, if these guys are going to be doctors, why don’t I give it a try?”

Alger became one of eight women in the Seton Hall College of Medicine class of 1964. She took a year off during medical school to work as a researcher in the anatomy department, an experience that she remembers as a powerful force that steered her towards academic medicine. Anthony Boccabella, PhD, JD, a professor of radiology, gave her the opportunity to write abstracts and present a paper at a national meeting, which sealed her interest in academia. “That was an unusual experience,” she explains. After that point she “didn’t give too much else consideration” to a career choice. She returned to Seton Hall as an assistant professor of anatomy in 1966 and received a joint appointment in medicine soon afterward.

Shortly after joining its faculty, Seton Hall moved to Newark to become part of UMDNJ. The transition proved challenging, as riots erupted in Newark and many faculty members resigned. Alger stayed. “Community outreach, and wanting to better the lives of people around you—those were the core values that spoke to me about NJMS,” she explains.

She committed herself to serving and improving the school by asking two questions: how to make education more interesting and how to make it more effective? Following innovation trends in medical education, she became particularly interested in technological integration.

In 1977, Alger was given an opportunity to redesign the “Introduction to Clinical Sciences” course used to prepare students for clerkships. Her work with faculty and students delivered significant results, bringing students’ scores on part two of the U.S.

.....

She grew up when there was little opportunity for women... and remembers thinking, **“If these guys are going to be doctors, why don’t I give it a try?”**

.....

Medical Licensing Examinations (USMLE) into the top 5 percent nationally, even as the school’s enrollment grew by 50 percent. She was soon promoted to Associate Dean for Education.

Alger searched for innovations in medical education that could strengthen the NJMS curriculum, acting as a member of the steering committee of the Association of American Medical Colleges’ Northeast Group on Educational Affairs and collaborating with colleagues at McMaster University in Canada. “I tend to look at innovation with an eye toward: What’s different? What’s the core? If this is worthwhile, how can we put it in place here?”

During the next two decades, Alger brought problem-based learning and standardized patients to NJMS, helped to redesign both basic science and clinical curricula, initiated the 7-year Baccalaureate/MD programs, and oversaw the construction of the 12 room Clinical Skills Center. She also secured NIH grants for 46 summer research positions, which she feels are critical in opening career paths, especially for students from disadvantaged backgrounds. She believes her success in driving change is the result of a process that includes, “doing your homework, becoming personally convinced,

knowing your environment, translating an idea accordingly, proving it’s a worthwhile investment, having organizational skills, and team building.” But beyond all, Alger believes driving change is about empowering individuals, “supporting people who have good ideas, recognizing people’s skills and giving them the opportunity to spread their wings.”

She credits much of her success to coworkers and superiors for their support and their unwavering commitment to improving medical education. “I couldn’t have asked for more opportunities or for more dedicated, caring people to work with,” she says, citing their “complete dedication to the students.” She adds, “so much of what I have accomplished was because of the people I worked with, the encouragement I got, and the rewards from seeing the impact of the changes.”

In 2004, Alger accepted a position as Senior Associate Dean for Education at Weill Cornell Medical College in Doha, Qatar. She says that, “leaving NJMS was hard, but being part of the first U.S. med-

ical school to offer the MD degree overseas was an incredible opportunity.” After nearly 40 years’ experience, Alger believed she had been offered “the chance of a lifetime” to help bring American medical education to “a part of the world where the perception of this country is mixed at best.” Overriding any reservations she may have had was “a voice deep inside that said, ‘You can’t not do this.’”

As foreign as her new surroundings were, Alger was pleased to find several powerful reminders of NJMS including “a very international group of faculty motivated by ideals of service and contribution to society.” She was delighted to find “the same kind of people who work at NJMS.”

Alger has generously donated scholarship funds to NJMS hoping to increase the kind of opportunities that she remembers as integral in building her own career in medicine. “I’m so grateful for the rewards I’ve enjoyed as an alumna of NJMS. It’s a tremendous privilege to be able to help young physicians realize their dreams. You invest in students; it’s as simple as that.” ●

FYI: The Legacy Society

Planned gifts to UMDNJ–New Jersey Medical School (NJMS) provide a way for you as an alum to create a legacy at the school while furthering a cause about which you care deeply. More and more alumni are making planned gifts through the Foundation of UMDNJ in ways that benefit their specific interests and circumstances while benefitting future generations of medical students and the community. The Legacy Society was formed to honor these special supporters.

A planned gift allows you to maximize the personal benefits of your charitable giving by taking advantage of state and federal tax laws. With careful planning, it is possible to minimize taxes, and reduce or eliminate gift, estate, inheritance and generation skipping taxes. You can enjoy these tax savings while turning appreciated assets into an income stream for yourself or your loved ones. Some common planned giving options include bequests, gifts of life insurance or retirement plan benefits, gift annuities, remainder trusts, and gifts of real estate.

For information about the Legacy Society, or to discuss a planned gift, please contact Elizabeth Ketterlinus at eketterlinus@njhf.org or 973-679-4684.

1960'S

James DeGerome, MD'68, author of *The Cure for the American Healthcare Malady* (Strategic), is president of the Digestive Disease National Coalition, Washington, DC.

Gerald S. Levey, MD'61, stepped down in January 2010 as vice chancellor of medical sciences and dean of the David Geffen School of Medicine, a position he held since 1994.

Vincent Oriente, MD'66, has started his third career as a movie screen writer and consultant in medicine.

Marinos A. Petratos, MD'60, returned to NJMS to deliver a Dermatology Grand Rounds. Petratos maintains a practice in New York City and Athens, Greece.

1970'S

Richard W. Huss, MD'71, of Potomac, MD, an allergy and immunology specialist, is semi-retired and no longer with ENTAA Care.

John Kindzierski, MD'76, is the residency program director of OB/GYN, at St. Barnabas, Livingston.

IN MEMORIAM

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

Marianne C. Link, MD'64, on April 28, 2010, at her home on Bald Head Island, NC. Link practiced anesthesiology for 35 years in Los Angeles until retiring in 2000 and is survived by her brother, Walter Link, and three nephews.

Milton Prystowsky, MD, long-time and much-loved faculty member in the NJMS Department of Pediatrics and founder of the Division of Pediatric Cardiology, on May 10, 2010. Prystowsky was married to the late Rose Prystowsky, MD, and received numerous honors including a Lifetime Dean's Award. In his signature bow tie, he continued to practice medicine even after his retirement and to campaign for children's needs, helping to establish the New Jersey Catastrophic Children's Illness Fund. He is survived by a family full of children, grandchildren, great-grandchildren and medical doctors, including his brother Sidney, and sons, Drs. Stephen, Eric, Michael, Barry and Richard. Grandson Brian was in the NJMS class of 2006. Donations to the Drs. Milton and Rose Medical Student Award can be made through the Foundation of UMDNJ.

Joseph J. Seebode, MD, 80, on January 4, 2010 in Cedar Grove, NJ. Seebode was chief of urology, at UMDNJ–NJMS, and director of the urology residency program. He became a full professor in surgery, training over 75 residents in urology. He also received the humanities Fellowship Award and the Harris L. Willits Chair in Urology, which was the first chair ever received at UMDNJ. Seebode is survived by his wife, Dr. Anna M. Seebode; three sons and two daughters, six grandchildren and a sister.

Barry N. Shaklan, MD'61, of Phoenix, AZ, on April 9, 2010. Shaklan was a career military officer and eye surgeon who served his country while stationed in Ohio, Texas, Florida, Arizona and Libya. He is survived by his wife, Barbara, two brothers, three children, three step-children and grandchildren.

Richard Starita, MD'77, 58, of Dallas, TX, on September 6, 2009. Starita practiced ophthalmology with Glaucoma Associates of Texas for the past 23 years and is survived by his wife, Paulette, and his father.

Philip J. Urso, USAF, Col. (Ret.), MD'63, on October 5, 2009. He is survived by his wife, Annette, L. Urso, two sons and two daughters, his mother and five grandchildren.

Join the Alumni Association of New Jersey Medical School

General Dues	\$65.00
Resident in Training	\$15.00
Lifetime Membership	\$1,000.00

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

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.

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

Name	Graduation Year	
Home Phone	Office	Fax
E-Mail Address		
Mailing Address		
What I Have Been Doing (enclose photos)		
<input type="checkbox"/> I would like to be a representative for my class.		

Meryl LeBoff, MD'75, founder and director of the Skeletal Health and Osteoporosis Center and Bone Density Unit at Brigham and Women's Hospital, was promoted to Professor of Medicine at Harvard Medical School.

1980'S

Joy L. Kreeger, MD'89, practices in East Aurora, NY and is the proud mom of two teenage sons.

Gerard A. Malanga, MD'87, has started a new practice dedicated to the nonoperative treatment of sports, spine and orthopaedic injuries in Summit.

Thomas Ortiz, MD'81, medical director for Newark's Department of Family and Child Wellbeing, was appointed chief of Family Medicine at Newark Beth Israel Medical Center.

Kenneth J. Paonessa, MD'84, is looking forward to his 8th volunteer trip to operate in Ghana, West Africa, and hopes to volunteer in Haiti to help with orthopaedic injuries. Paonessa resides in Lyme, CT.

Gerard Pregoner, MD'83, developed Verify EMR and Verify Labs, an intuitive EMR for physicians.

1990'S

Mark Bagarazzi, MD'90, was appointed chief medical officer for Inovio Biomedical Corporation's clinical and regulatory programs in San Diego, CA. A leader in DNA vaccine design, development and delivery, Bagarazzi was Merck's director of regulatory affairs for vaccines and biologics.

Evan J. Fertig, MD'99, has been appointed the co-director of the Epilepsy Center of Excellence at Jersey City Medical Center and also maintains a private practice in Hoboken.

2000'S

Edward Garay, MD'09, a resident at the University of Pittsburgh Medical Center, writes that he and his family are happy and settled in their home.

Michael Janeczko, MD'01, and his wife Suzanne celebrated the birth of Benjamin Thomas in the fall of 2009.

Brian Prystowsky, MD'06, recently authored an article on pediatric asthma for the Sonoma County Medical Magazine about the 2007 NHLBI guidelines for Medicaid participants. He is working for FQHC Southwest Community Health Center in the Sonoma County town of Santa Rosa.

JOHN PEZZUTO, PhD

UMDNJ-Graduate School of Biomedical Sciences '77

Happy in Hawaii

With a professional path that “really defines coast-to-coast,” John Pezzuto may hold a UMDNJ record for illustrious stops along the way from New Jersey to Hawaii. He started out at Rutgers in chemistry and this GSBS graduate, who is a professor and Founding Dean of the University of Hawaii (UH) at Hilo College of Pharmacy, can look back on career stops at Massachusetts Institute of Technology, University of Virginia, University of Illinois, Purdue University, and even the University of Munich “and feel content that I was able to give more than I received. I helped to shape three important institutions.” Pezzuto received the Distinguished Alumni Award from UMDNJ-GSBS in 2003. In Hawaii where he has been since 2006, he is happy that his research has been cited more than 10,000 times since 1995 and proud of his contributions to cancer chemoprevention and natural products. Always engaged in research and scholarship even while fulfilling obligations as a dean, he says, “When we started drug discovery programs in cancer chemoprevention, the field was scarcely known. Now it is well established with pockets of excellence throughout the world. When I look at a carrot, I see beta-carotene. When I look at broccoli, I see sulforaphene. When I look at a bottle of red wine, I see resveratrol. I believe cancer chemoprevention will make a huge difference in helping to defeat this dreadful disease.”

Pezzuto finds Hawaii to be “an exquisite, unique place. The geographical diversity of the big island is especially notable with 11 of the world’s 13 climate zones. How many people think about making a snowman and surfing on the same day? Swimming in January is nice. And the ethnic diversity of our College of Pharmacy is second to none.” Pleased with the progress at UH-Hilo, “it is the only such college in the entire Pacific region. “I’m proud of our students, the rapid progress here and our strong feeling of ‘ohana’ (family) that has developed.” He admits, however, that getting to Washington, DC, for instance, can take 18 hours, not the 90 minutes flying time it was from Chicago. He knows intimately “the full impact of ‘shipping included except to Alaska and Hawaii’ and the importance of planning ahead. Can you imagine all stores being out of corned beef on Saint Patrick’s Day?”

When asked to choose his most amazing or memorable experience, Pezzuto’s answer instantly underscores this alum’s remarkable natural charm. Though he has met and worked with great people, published hundreds of manuscripts, traveled the globe several times and helped to build academic and research institutions, he admits that meeting his wife, Mimi, in Chicago is at the top of the list. “I asked her to marry me the first day we met and she agreed. It took us a year to realize we were both serious on that first day,” he says. “We have been married for 25 years and she has taught me a lot about life. We have three outstanding children, ages 7, 9 and 16, and I can’t decide if they keep me young or the opposite.” His family is happy in Hawaii and he isn’t looking to move again but he says, “I never would have predicted the path so far.” To get in touch, email: pezzuto@hawaii.edu. ●



Alumni@UMDNJ

A new online newsletter for alumni of all UMDNJ schools, including NJMS and GSBS, was launched in May. Follow this internet link <http://umdn-jalumni.blogspot.com/> to add your comments and send us your news. GSBS graduate John Pezzuto (left) is featured right now.

Tree of Life

Take a closer look at the Memorial Tree of Life on the wall of the UMDNJ-The University Hospital (UH) lobby. This bronze wall sculpture is a work in progress. Dedicated on March 30 to Eric Munoz, MD, a long-time trauma surgeon and leader at UH, who died last year, the memorial will continue to incorporate the names of people who are being honored with a gift to UH and NJMS. Designed by artist Hans Kraenzlein, the sculpture features engraved birds, leaves, stones and wall plaques. ●



Stories Behind the Scholarships

BY MARYANN BRINLEY

Money talks, especially when it comes to scholarships awarded in memory of someone who was loved here in life. The NJMS Alumni Association handed out more than \$180,000 in awards to second, third and fourth-year students last fall. This year, even in tough economic times, the gifts from donors will still speak loudly and clearly. In fact, behind each award and every grateful recipient is a good story.

Take **The Joe Alexander Scholarship**, for example. Mary Alexander, NJMS'79, is honoring her father. "Born in 1918 in Butte, Montana, he graduated from Montana State in 1940, a chemical engineering major... The majority of his 39 years working for Rayonier Lab in Cedar Knolls as a chemist, he walked to work in all weather... Even to age 90, he maintained his sense of humor and sense of rhythm as he loved music." Mary goes on to explain that after his death, her dad even willed his body to science.

The **Scholarship in Honor of Professor A. K. Bhattacharya**, given by Ashish K. Bhattacharya, NJMS'90, of Freehold, keeps the memory of his grandfather, Professor A.K. Bhattacharya, alive. "Founder of Sagar University in India, he dedicated himself to creating equal educational opportunities for all people, and community service programs."

Sometimes, family and friends pool resources to create a scholarship, as in **The Endowed Scholarship Fund in Memory of Dr. Valentino Chiaviello '04**. A member of the NJMS graduating class of '04, Chiaviello made it through medical school in spite of great pain, "daily struggles, physi-



Family and friends created a scholarship in honor of Valentino Chiaviello, MD'04, (second from the right, back row).

cal assaults on his body and the psychological trauma of dealing with his own mortality... Valentino will remain forever young in our hearts and memories." Awarded annually, Val's scholarship gives old friends a chance to remember the good times with friends (see photo) and the trips to Atlantic City where Val was the king of the craps table. Always fun-loving, this NJMS graduate loved to share escapes with his friends.

Occasionally, co-workers step forward to initiate the memorial. **The Rhoda Halperin Memorial Scholarship**, established last year by Maria Soto-Greene, MD'80, vice-dean of the medical school, is in honor of the wife of William Halperin, MD, PhD, chair, Department of Preventive Medicine and Community Health. Rhoda, a professor and chair of anthropology at Montclair State University, "was an important figure in medical, urban, applied and economic anthropology," Soto-Greene explains. She exerted "a profound impact on students and colleagues." In gratitude, the Halperin family, including her sons Samuel and Michael, will match funds donated in her name.

The story behind **The Miriam and**

Herman Swerdlin Scholarship is a history lesson. The donors, Aron H.R. Swerdlin, MD, NJMS'72 (a nephrologist in Ventura, CA) and his wife, describe the trials of his parents. Miriam Broido Swerdlin was born on Dec. 25, 1917, in Lithuania, spoke six languages and saw her entire family murdered by the Nazis. Hidden by a farmer, Miriam escaped with Herman who was born in Poland on May 25, 1903, and survived the killing of his first family, a wife and three children. "Life was difficult for them but they always instilled in their two sons that an education was of the highest priority."

As the NJMS Alumni Association explains, "Personal reasons for these generous gifts are different in each case but the collective reason is always the same: to support physicians of the future." To explore the idea of a scholarship in the name of someone you miss or someone whose memory you want to keep alive, contact either Elizabeth Ketterlinus at the Foundation of UMDNJ, (973) 679-4684 or eketterlinus@njhf.org.; or Dianne Mink at the Alumni Association-NJMS, (973) 972-6864 or minkda@umdnj.edu. ●

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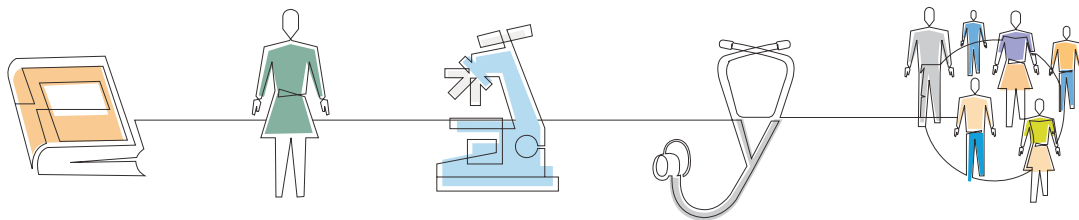
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