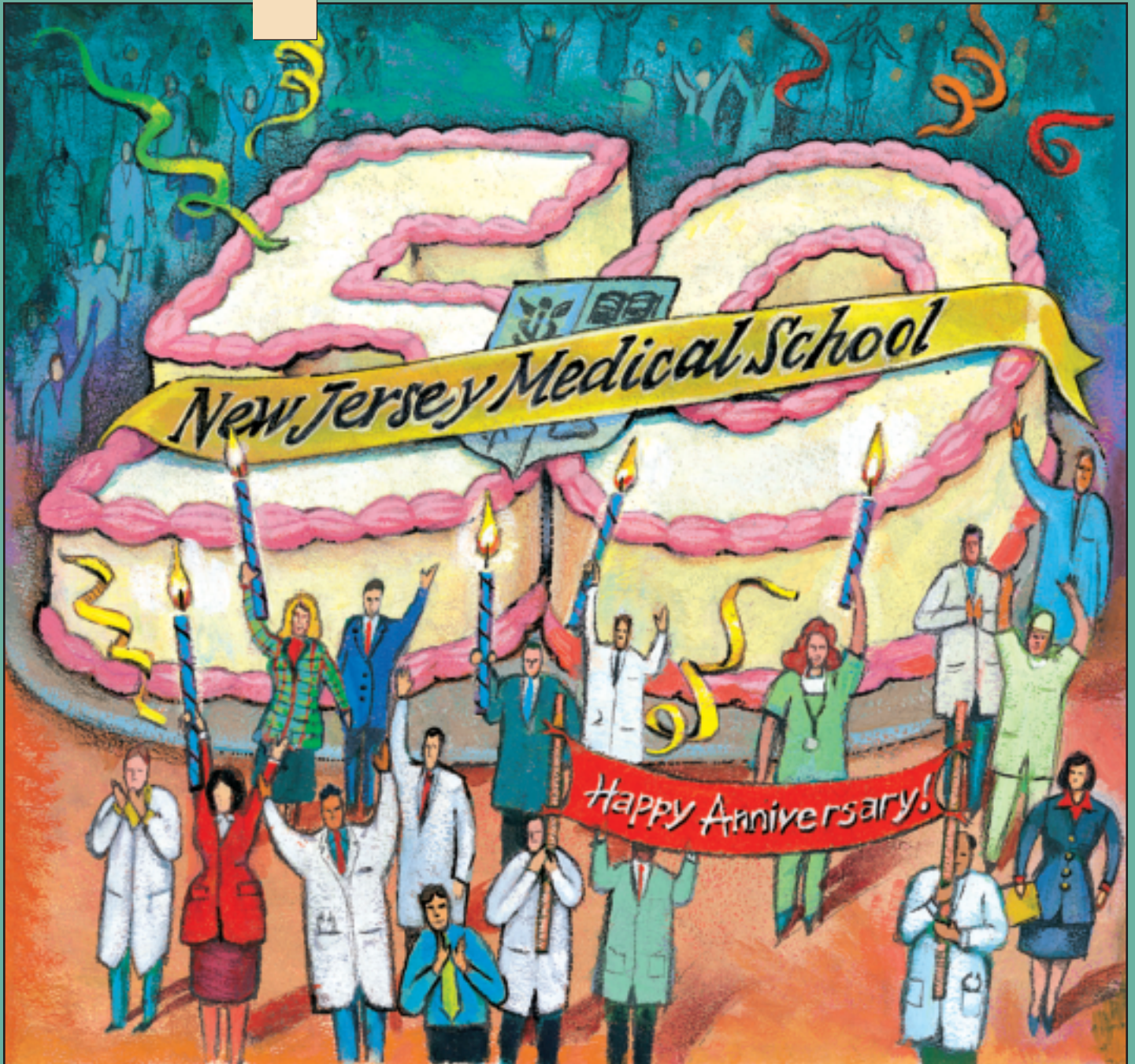


New
Jersey
Medical
School

pulse



SPECIAL ISSUE: CELEBRATING 50 YEARS

PHARMACOGENETICS • TESTING NEW THERAPY FOR SPINAL CORD INJURY
ALUMNI NEWS AND FEATURES

Russell T. Joffe, MD

Message from the Dean



THIS ACADEMIC YEAR, NEW JERSEY MEDICAL SCHOOL REACHES A MAJOR MILESTONE: the 50th anniversary of our founding. While it is only fitting for us to celebrate our achievements throughout this golden anniversary year, it is also critical that we examine current challenges and capitalize on opportunities that will ensure a bright future for NJMS.

We have much to celebrate. As the state's oldest academic medical institution, we have grown from our first entering class of 80 medical students to become a competitive medical school that receives nearly 4,000 applications annually. This year, three-quarters of our applicants were from out-of-state.

Our success is the result of a strong foundation. Throughout the years, we have built upon this foundation to create a rich tradition of quality education, innovative research, compassionate patient care and community outreach.

Many of our alumni have gone on to enjoy successful and meaningful careers in patient care, public health, medical research and academic medicine (see feature article on page 12). Their efforts and those of so many of our faculty members have positively impacted healthcare in New Jersey and beyond.

We continue to reassess our role as a leading medical school. With this in mind, the launch this fall of our new Jubilee Curriculum will widen the scope of our students' education to include more problem-based learning modules, increased clinical experiences and a renewed focus on humanistic medicine. In preparing for a reaccreditation visit from the Liaison Committee on Medical Education in March 2005, we have had the opportunity to evaluate all of the educational offerings and services that we provide.

It was former U.S. Secretary of State Dean Rusk who once said, "Unless we can find some way to keep our sights on tomorrow, we cannot expect to be in touch with today." This, too, is true for New Jersey Medical School. By looking ahead to the future, we are ensuring that we are making meaningful contributions today. Join us as we celebrate our success.

NJMS Pulse

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 OF NEW JERSEY
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Dean, UMDNJ—New Jersey Medical School
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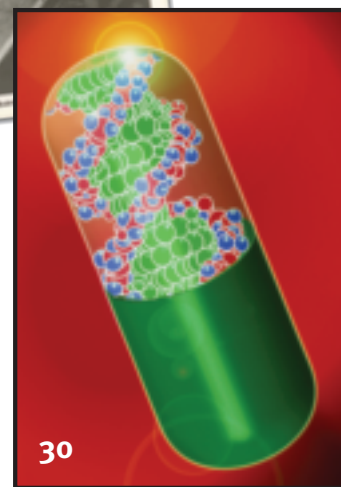
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New Center Pursues Proteins' Secrets

INSIDE THE UMDNJ CENTER FOR ADVANCED PROTEOMICS RESEARCH (CAPR), the future of high through-put molecular medical research is no longer a dream but a reality. This state-of-the-art core facility in the Medical Science Building operates equipment valued at more than \$2 million, including the QTOF and the MALDI-TOF/TOF mass spectrometers which search for answers to scientific questions about changes in protein expression in diseases. Requests come from all over UMDNJ, outside industry and other institutions, including Johnson & Johnson, Mount Sinai School of Medicine and Princeton University. "Our involvement in collaborative research has allowed CAPR to expand, which has facilitated the understanding of the unknowns in the world of proteins," says Hong Li, PhD, NJMS assistant professor of biochemistry and molecular biol-

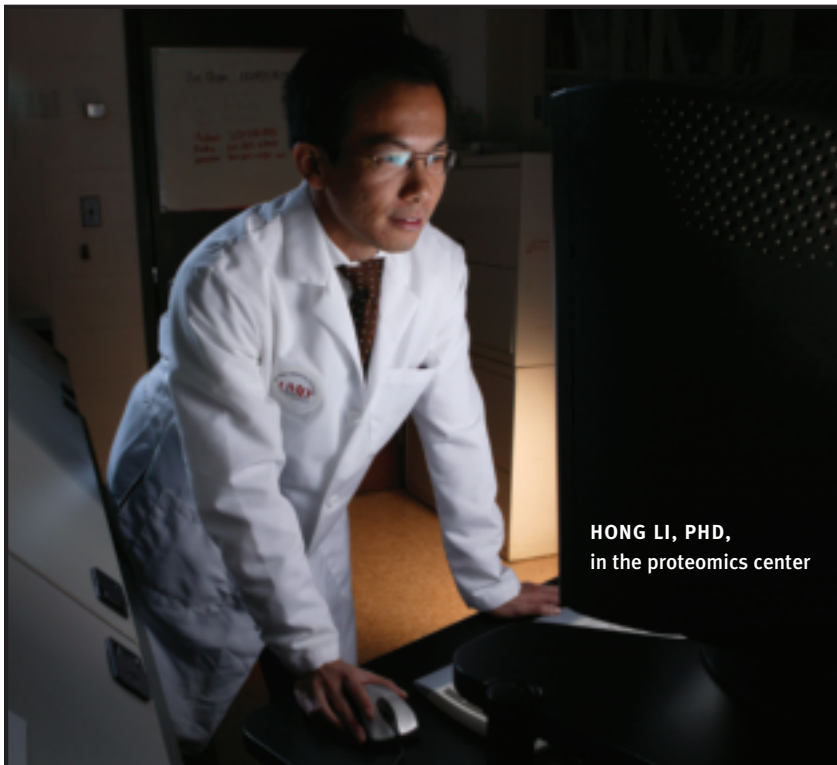
ogy, and CAPR director. In order to find therapies and cures and to diagnose diseases, Li says that a better understanding of the proteins expressed by the 30,000 genes in the human genome is critical.

"Proteins, not genes, are what carry out cellular functions," Li explains. The word proteome refers to all the functional proteins produced by the cells under very specific conditions. The MALDI-TOF/TOF mass spectrometer can examine 2,000 proteins a day. When something goes wrong physically, "you need to understand the changes in protein expression from genes in order to correct the problem. Have they abnormally increased or decreased?" he asks. Li believes that proteins are the future targets for the development of new drugs.

Earlier diagnosis for diseases like multiple sclerosis, for instance, will depend upon advances in proteomics. To detect MS now, physicians and patients must simply wait for symptoms to appear before a diagnosis can be made. However, changes in protein levels could have preceded signs of the disease. Diagnostic kits could be developed based upon particular protein changes detected by proteomics.

From 2001 to 2002, CAPR received approximately \$2.3 million in state and federal funding to buy new proteomics equipment. Additional financial support now includes a five year, \$3.8 million grant from the National Institute of Neurological Diseases and Stroke. "We'll be providing a collaborative platform for neuroscientists to determine protein alterations when they focus on diseases like multiple sclerosis, Parkinson's and spinal cord injury. We can also help investigators generate preliminary results for grant applications in those areas," says Li.

The center is directed by Li with a staff of five researchers. "Now, we have the capability of analyzing smaller concentrations of proteins and solving more difficult problems. Most of the proteins are in public databases. By comparing just a partial sequence—a snapshot of a protein—we can identify it." A variety of protein services—from protein identification to large scale proteomics projects—can even be ordered easily online at the CAPR Web site, <http://www.umdnj.edu/proweb>. For more information, call Li at 973-972-8396. ●



HONG LI, PHD,
in the proteomics center

Healing Paralysis:

A Clinical Trial at UH

FOR THE TREATMENT OF SPINAL CORD INJURY, the future has arrived in Newark. In November, The University Hospital (UH) became the fourth institution in the world to use a new technology which utilizes a patient's own cells for curing paralysis. In Israel and Belgium, 14 people who were paralyzed took part in the Phase I clinical trial. The preliminary results of that initial trial were extremely encouraging.

UH is now participating in the Phase II, multi-center, clinical trial, according to neurosurgeon Robert F. Heary, MD, NJMS associate professor of neurological surgery, director of The Spine Center at the Neurological Institute of New Jersey in Newark, and one of the principal investigators. He will be working with Karen Kepler, MD, assistant professor of physical medicine and rehabilitation and medical director of the spinal cord injury program at NJMS. Heary explains, "We'll be taking skin, or dermis, from inside the upper arm, as well as blood to produce activated macrophages which will then be re-injected into the spinal cord just below the lesion. Yes, these are stem cells but not from a fetus. We are using the patient's own body to produce the activated macrophages in a method that takes about 36 hours at a designated, independent cell center in New Jersey."

Macrophages or white blood cells, according to Proneuron Biotechnologies, developer of ProCord, are the human body's first line of defense against injury and illness, secreting growth factors that promote a controlled

inflammatory reaction. The central nervous system, which includes the spinal cord, ordinarily has low levels of these macrophages, because it is isolated from the bloodstream.

Results leading up to this stage demonstrated that patients with little chance of improvement using traditional methods "showed substantially better gains than what would have been expected. I've been in academic and clinical pursuit of this unique, revolutionary treatment for years. I've put all of my energies into spines and spinal cord injury since becoming a physician 19 years ago. Now, we're ready to enroll spinal cord injured patients from all across the country," Heary says.

This trial is open only to individuals between ages 16 and 65 who have suffered what is known as a "complete" or "ASIA-A" injury, resulting in the full loss of motor and sensory nerve function below a certain level (motor level C5 to T11). Not all paralyzed patients are included because of the risk of further impairment. Heary explains that when respiratory function is involved and the patient requires a ventilator for breathing, or when the injury is above level C5 on the spinal cord, the chance of causing additional harm is too great. In this trial, the window of time is also limited. Candidates for the procedure must be enrolled and have the ProCord administered between five and 14 days after the initial injury. Waiting five days is key because some patients begin to recover on their own by then. Among individuals who experience no change in sensory and motor function five days



"We're going to take what is a devastating injury and find a better way of treating it using cells from the patient's own body."

Robert F. Heary, MD

after an accident and who are still in this immediate, or acute, phase, "the overwhelming majority rarely improve.

"What makes spinal cord injury so tragic is that these are people who are struck down at their most productive, dynamic time of life," Heary says. "Current conventional treatment offers them little improvement. When told they might have a chance to do something or to become part of a very unique and exciting study of a revolutionary treatment, every one of them would say, 'Yes.' I know it. I've heard them wish it."

Referring physicians can contact the UH study coordinator, 24 hours a day, at 973-641-0600. ●



Cancer Care in Newark:

A Tale of Two Building Efforts

YOU CAN STILL SEE THE ONGOING CONSTRUCTION on the new building on South Orange Avenue in Newark which began in the summer of 2002. It's the future New Jersey Medical School–University Hospital (NJMS–UH) Cancer Center.

“Walk over but take a hard hat to wear,” warns Harvey L. Ozer, MD, the director and a driving force behind this nine-story, 211,615 square-foot, high-tech facility. “Barring major delays, we're talking about opening at the end of 2005 or early in 2006.” The Cancer Center is an affiliate of the UMDNJ Cancer Institute of New Jersey. It is being constructed as part of the UMDNJ Capital Facilities initiative on the Newark campus as a joint effort of NJMS and UH. In addition, there have been two construction grants from the National Institutes of Health (NIH) for \$3 million and \$3.7 million. The state of New Jersey is providing \$9 million.

Physically connected to UH, the first three floors will be devoted to ambulatory clinical care and are designed to fill with natural sunlight for cancer patients and families under stress. Meanwhile, three upper floors are slated for state-of-the-art laboratories. With a monumental staircase connecting three floors inside, scenic views of downtown Newark everywhere, a terrace, a healing garden, wellness center, a library, support facilities for community outreach as well as everything from the Breast Center to the Dean and Betty Gallo Prostate Center, this building will stand out.

The construction crew, tower cranes, Komatsu excavators and “Sidewalk Closed” signs are obvious. What you can't easily see about this project—the creation of a major, comprehensive cancer center which will deliver high quality clinical care, conduct cutting edge research and reach out to a local community stung by high rates of late-stage, often undetected cancers—is the painstaking, collaborative challenge of building the organization of people who will work there.

“In most hospital cancer centers, patients are seen at a medical oncologist's office, at a radiation oncologist's office and at a surgeon's office while everyone tries to coordinate their efforts,” explains Lawrence Harrison, MD, the associate director of clinical services for the Cancer Center. Also director of



surgical oncology at UH, Harrison points out what makes this “people” part of the building phase so interesting. “We're going to be unique because medical, radiation oncology and surgical oncology are all going to be under the same roof. Our concept is to treat cancer on a site specific, or type of cancer, basis. Someone with lung cancer, for instance, will have the opportunity to see all their specialists within the same clinical office space and possibly at the same visit. This concept of an integrated program is going to be unique here in New Jersey, if not around the country.”

The Cancer Center Community (CCC), established last fall, and their Web site (<http://njmsresearch.umdnj.edu/cancercenter/c3>) were among the first steps taken towards helping experts in cancer-related fields cross traditional lines. Within three hours after posting this Web site, which was designed for Newark-based investigators who want to share their research expertise and network, more than 30 people had signed on to become part of CCC. The community is now 77 members strong and still growing.

Research is changing the care of cancer, according to Ozer: “Though there are still a lot of very fundamental, unanswered questions about cancer, there are a number of questions which have been answered. We can now talk realistically about transferring this information to clinical care.” The new NJMS–UH Cancer Center will accommodate up to 30 investigators and their associates. They may not all be there when the doors open in 2006 but both Ozer and Harrison believe that by putting this translational research in the same building with clinical programs, “you can have the interaction that will get the research to the patient.” ●

\$2 Million Gift Endows NJMS Scholarships

THE LARGEST SINGLE SCHOLARSHIP ENDOWMENT in the history of the University of Medicine and Dentistry of New Jersey (UMDNJ) was made possible by the generosity of Joseph L. Muscarelle, a real estate developer in Maywood, NJ, and a member of the UMDNJ Foundation Board of Trustees since 1988. His \$2 million gift established the Sharon and Joseph L. Muscarelle Endowed Dean.

“I feel that the key to the best healthcare in our state starts with our medical students,” Muscarelle said. A lifelong resident of New Jersey, he has been married to his wife, Sharon McDonnell Muscarelle, for 45 years. “We have so many talented students in our state. It is important for our medical schools to keep the best and brightest right here.” To qualify for the scholarship funds generated by this gift—estimated to be about \$100,000 annually—students will have to demonstrate academic excellence and financial need. Recipients will also promise to practice medicine in New Jersey after completing their educations. “It is my hope that this endowed deanship will allow New Jersey Medical School to compete favorably with other medical schools outside of the state when it comes to being able to offer attractive financial incentives to its students.” Muscarelle has been supporting scholarships at the medical school for more than a decade and he is currently chair of the scholarship committee for the Foundation Board.

George F. Heinrich, MD, vice-chair and CEO of the Foundation of UMDNJ, stated, “Joseph Muscarelle is a wonderful example of a person dedicated to making New Jersey the best place it can be. He stands by his convictions and is doing something positive to assure that what is important to him will benefit others now and in the future.” ●



Pain Center Opens

AT ANY GIVEN TIME, some 25 million Americans are suffering from acute pain, which is typically relieved in less than three months. Another 50 million people in this country endure chronic pain that lasts longer than three months—often, for years.

The Comprehensive Pain Management Center at University Hospital, which opened its doors in January 2004, treats all types of chronic pain, including back, neuropathic, cancer, musculoskeletal/rheumatologic, post-injury and surgical pain.

Medication is one of the chief avenues to provide pain relief. Traditional pain medications may be incorporated into the patient’s treatment plan. This may include any of the following categories of medica-

tions: NSAIDs such as Lodine, Aleve or Naproxen; short acting opioids such as Percocet, Vicodin or Tylenol with codeine or long-acting opioids such as Oxycontin, morphine sulphate or Duragesic patch.

For treatment of lower back pain, physical therapy is often prescribed. Nerve blocks, such as epidural steroid or facet joint injections, are also a mainstay treatment for many lower back problems, says Kaufman, who is board certified in pain management. Other non-invasive treatments include Transcutaneous Electrical Nerve Stimulation, or TENS, and radiofrequency ablation. With TENS, a mild electrical current is delivered through the skin to specified nerves, blocking pain messages or releasing endorphins. Radiofrequency ablation uses radio waves to heat, or burn, a problematic nerve, destroying the nerve and interrupting pain signals.

To learn more about the pain center, call 973-972-2085. ●



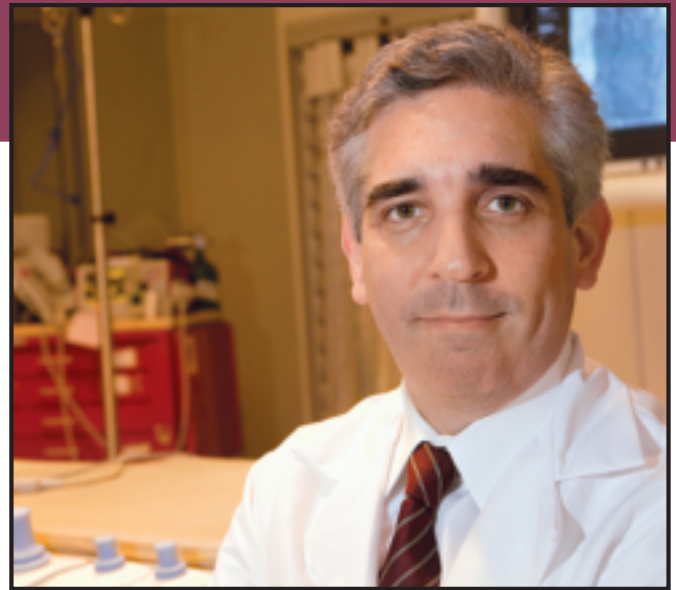


Heart Failure Medicine in the News

H **HEART FAILURE SPECIALIST** Marc Klapholz, MD, has been a principal investigator on more than 70 clinical research studies in heart failure and other cardiovascular diseases. Patients who are not responsive to the traditional drugs for heart failure, or who lose responsiveness over time, as the condition worsens, are often referred to him for therapies not yet generally available.

He recently participated in a major clinical trial to determine the value of a

drug specifically aimed to treat heart failure in black patients. Called BiDil and manufactured by NitroMed, the drug was determined to be so effective that it was considered unethical to continue giving some patients a placebo. The clinical trial was halted early and all 1,050 participants will be offered the medication. The drug is going for FDA approval, which may be granted in 2005.



There are an estimated 750,000 blacks with heart failure and many are not being helped by the standard medications. Blacks are more likely than whites to die of the disease. BiDil works by enhancing the level of nitric oxide, a gas that is released from the lining of arteries and which may be more commonly deficient in black patients with heart failure. “However,” Klapholz cautions, “the differences in terms of treating heart failure have to do with genetics, not skin color.” (See pharmacogenetics article on page 30.)

Among his other recent efforts to diminish the impact of heart failure was his participation—as a principal investigator—in a clinical trial of the novel compound tolvaptan, a “selective vasopressin receptor antagonist.” According to Klapholz, it is a “fascinating drug that addresses fluid overload that is part and parcel of heart failure.”

Developing and heading up sites for national and international research trials of new heart failure medicines is only one facet of Klapholz’s work. He is also board certified in echocardiography and interventional cardiology. As the recently appointed director of cardiology at New Jersey Medical School and The University Hospital, Klapholz will focus much of his energy on “growing a premier cardiology program” on the Newark campus. ●

2004 Faculty of the Year

EACH YEAR THE NJMS FACULTY ORGANIZATION recognizes two outstanding faculty members, one from the basic sciences and one from clinical sciences, as Faculty of the Year. This year, the recipients are Anthony V. Boccabella, JD, PhD (right), and Kenneth M. Klein, MD. Boccabella, the basic science recipient, has held many leadership positions at NJMS. A keen scholar and effective administrator, he served as chair of the Department of Anatomy from 1971 to 1987. The author or co-author of several peer-reviewed articles, he has been elected to an honorary membership in the NJMS Alumni Association. Klein has twice served as interim chair for the Department of Pathology and is author or co-author of numerous articles. He has conducted the longest-running single-person conference at UH, the GI Biopsy Conference. He has received 21 Golden Apple Awards, as well as the Crystal Apple Award for lifetime achievement. He is a member of the UMDNJ Master Educators Guild and earlier this year was elected to membership in the NJMS Beta chapter of Alpha Omega Alpha. ●

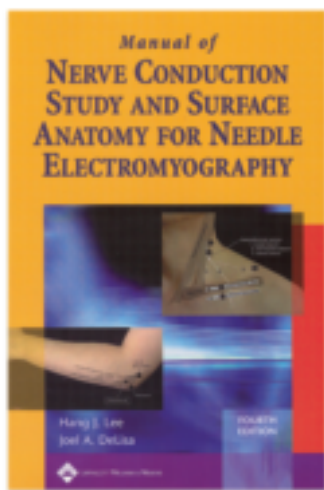


Book Reviews

Nerve Conduction Study and Surface Anatomy for Needle Electromyography, 4th Ed.

by Hang J. Lee, MD, and Joel A. DeLisa, MD, MS
Lippincott Williams & Wilkins

THE BOOK IS A PRACTICAL, ILLUSTRATED GUIDE that demonstrates the proper techniques for common nerve conduction studies. The chapters are written in an outline format to help readers find information quickly, making it useful to both beginners and experienced clinicians. The first section outlines commonly performed nerve conduction studies, including placement of electrodes, typical electromyography equipment settings and normal values. The second section covers surface anatomy and includes information on patient position, needle insertion and activation, with more than 200 detailed illustrations and photographs.



About the authors: Joel DeLisa is professor and chair of physical medicine and rehabilitation at New Jersey Medical School, and president and chief executive officer at Kessler Medical Rehabilitation Research and Education Corporation in West Orange. Hang Lee is a professor of rehabilitation medicine at Korea University College of Medicine in Seoul, and clinical professor of physical medicine and rehabilitation at New Jersey Medical School.

Behavioral Science in Medicine

by Barbara Fadem, PhD
Lippincott Williams & Wilkins

THE BOOK AIMS TO HELP FIRST AND SECOND YEAR MEDICAL STUDENTS grasp the science of human behavior, addressing the relationship between physical and emotional health. It covers the concepts of the life cycle as well as the biological and psy-

chological bases of behavior. It also focuses on psychopathology, social behavior, and the doctor-patient relationship.

Each chapter includes clinical case scenarios and useful tables to reinforce critical information. The classifications and terminology are consistent with the DSM-IV-TR. More important, the text prepares its readers for the first two steps of the USMLE (U.S. Medical Licensing Examination) Boards.

About the author: Barbara Fadem, professor in the Department of Psychiatry, is the author of several publications. Her research interests include behavioral developmental neuroendocrinology and the sex differences in reproductive behavior of mammals during critical periods in prenatal and early postnatal development.

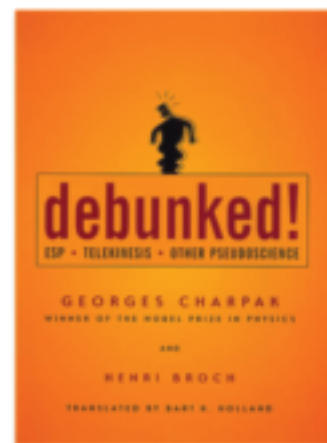


Debunked! ESP, Telekinesis and Other Pseudoscience

Translated by Bart K. Holland, PhD, MPH
The Johns Hopkins University Press

IN THIS BOOK, GEORGES CHARPAK, a physicist in Geneva and winner of the 1992 Nobel Prize in physics, and Henri Broch, a professor at the University of Nice, investigate and challenge how pseudoscientists use science, statistics and psychology to beguile an audience—sometimes for fun, sometimes for profit. Using simple science, the authors team up to show you the tricks of the trade and sleight of hand that keep astrologers, TV psychics, and spoon benders in business.

About the translator: Bart K. Holland, an associate professor of preventive medicine and community health in the Division of Biostatistics and Epidemiology, is an accomplished statistician, storyteller and the author of *What Are the Chances? Voodoo Deaths, Office Gossip, and Other Adventures in Probability*. ●





Game Boy Relaxes Pediatric Surgery Patients

RESearchers at New Jersey Medical School have found that hand-held video games are as effective in treating severe anxiety in children about to undergo elective surgery as the usual approach of administering an anti-anxiety drug. This conclusion is based on a study involving children between the ages of 4 and 12 who were about to undergo general anesthesia for surgery at UMDNJ–The University Hospital.

The study was presented by Anuradha Patel, MD, assistant professor of pediatric anesthesiology and principal investigator, at the Postgraduate Assembly of the New York State Society of Anesthesiologists in December.

“Going into the operating room can be a very anxious time for children even though they are with their parents,” says Patel. “Over the years, we have tried a number of activities from watching television to reading stories to using coloring books to help alleviate their stress, but none of these approaches provided enough distraction to lessen the anxiety.”

If the children get so anxious they act out, the only option has been to administer an oral dose of midazolam, says Henry L. Bennett, MD, associate professor of anesthesiology at NJMS and a member of the study team, “but the problem is that this drug can produce a ‘drug hangover’ which lasts longer than the effect of the anesthesia itself and makes some parents uncomfortable.”

The idea of using a Game Boy as a new approach for treating anxiety came from Patel after she had seen how absorbed her friend’s 7-year-old son was when he played with his Game Boy. Collecting the needed Game Boys and games became the community service project of Christopher Walsh of Allenwood, as part of his requirements for an Eagle Scout Award. He collected more than 30 Game Boys and 60 games.

The randomized controlled study, which took place between February and October, 2004, involved 78 children. The researchers used the modified Yale Pre-Operative Anxiety Scale, an observational instrument that quantifies children’s anxiety, to determine when to intervene with a pediatric patient.

The children who needed help were randomly assigned to



The idea of using Game Boy to treat anxiety came when Patel noticed how absorbed a friend’s child was when he played with it.

one of three groups. Each child had parents with them up to the point that the child lost consciousness from anesthesia being administered in the operating room.

One group had only their parents with them to help cope with their anxiety; one group was also given an oral dose of midazolam about 30 minutes before anesthesia; and each child in the third group was given a Game Boy about 30 minutes prior to anesthesia.

“The results of this study showed that the most dramatic difference in anxiety was observed in the group that had the Game Boy right up until the anesthesia took effect,” Bennett says.

The median change in anxiety for the Game Boy group was zero while for the midazolam group the increase was 7.5, in accordance with the anxiety scale. For the group who only had parental presence as a calming factor, the increase was 17.5.

“We would like to introduce the use of Game Boys in the pre-anesthesia waiting areas and allow the children to stay absorbed in the Game Boy right up until they are receiving the anesthesia in the operating room,” he says.

Other members of the study team were Melissa Davidson, MD, and Thomas Schieble, MD, also faculty members in the Department of Anesthesiology at the medical school. ●

Drama King

THERE'S A PLAYWRIGHT IN OUR MIDST. He is Solomon Caudle, program administrator in the Department of Neurological Surgery at NJMS. Caudle is co-author of an African-American musical about life, love, and HIV. The play, entitled *When a Man Loves a Woman*, was presented in June at the Crossroads Theater in New Brunswick to excellent reviews.

"The play is a love story with an AIDS twist," says Caudle. "It's about the consequences of poor choices and prejudice against people who are HIV positive. Ultimately, it's about the power of love."

Caudle, who was raised in Newark, has been profoundly affected by the AIDS epidemic, losing many friends to the disease. His co-author, Kabu Okai-Davies, is a native of Ghana who has also seen first-hand the devastation caused by the HIV virus. Ghana is part of sub-Saharan Africa, where an estimated 25 million adults and children are living with HIV, and where an estimated twelve million children have been orphaned by AIDS.

The play tells the story of a woman who leaves the man she is with for another man. Recognizing she's made a mistake, she returns to the first man and they are married. Years later she learns she has AIDS. Caudle describes it as urban theater. "It's a new genre of

theater that is not traditional," he says. "It's colorful, musical, and uses gutsy language to address issues that are relevant to the inner city and the people who live there."

Caudle's early experiences and education greatly influenced his writing. Growing up, he was exposed to poverty, drug abuse, HIV/AIDS and domestic violence. Among his first memories of Newark are listening to the chaotic sounds of the riots outside his apartment window.

A living theater course he took at Rutgers University in 1981 was his first introduction to the art of drama. "We went to see plays on Broadway and analyzed them, looking at their format and structure," he says. "Then we put on three plays during the semester. I directed *Arsenic and Old Lace*. After that, I was hooked."

He came to NJMS in 1988, first working in accounts payable, and joined the Department of Neurological Surgery a year later. Along the way, he started writing short stories, but his heart still belonged to the theater.

Caudle directed his first professional production in 1994. While doing volunteer work for a drug rehabilitation organization, he was asked to write a drama about the damaging effects of drug abuse on families. The play, called *Three Faces*, caught the attention of the director of the African Globe Theater, the resident theater company at Newark Symphony Hall.



"He thought it was very good, and asked if I would direct it for the African Globe Theater," he says. "At first I said, 'No way! I can't do it.' But I took a director's workshop beforehand and learned what I needed to know."

Caudle's plays have received great support from the UMDNJ community, particularly the Department of Neurological Surgery. Peter Carmel, MD, professor and department chair, has personally funded the set of every play Caudle has produced. That list includes *Three Faces*, a revival of *Ma Rainey's Black Bottom*, *Fences*, and his newest play, *When a Man Loves a Woman*.

In February 2005, Caudle and his creative team will travel to Australia to mount a production of *When a Man Loves a Woman* for the International Multicultural Arts Festival. "It's very exciting to be a part of this festival featuring plays from all over the world," he says. "Our play is about AIDS. It's such an important worldwide issue, so it fits right in." They are also in negotiations for a national tour.

"I want as many people as possible to see this play and hear its message," he says. ●





When Patients Trigger Radiation Detectors



- FDG PET scan—less than 24 hours;
- Bone and thyroid scans—3 days;
- Cardiac exams with thallium—up to 30 days;
- Iodine therapy—up to 95 days.

MEDICAL PROCEDURES SUCH AS iodine therapy, a popular thyroid treatment, can result in patients triggering radiation detectors for up to three months after treatment, according to a study presented by New Jersey Medical School radiology professor Lionel Zuckier, MD, in December at the annual meeting of the Radiological Society of North America.

Diagnostic nuclear medicine procedures, including FDG PET scans, bone scans and cardiac scans, can have a similar effect, although for shorter periods.

“The nuclear medicine community has been aware that patients set off detectors, but now we expect it to become a more common occurrence with the increasing number of extremely sensitive portable Homeland Security radiation detectors deployed among security personnel,” says Zuckier, the study’s author and director of nuclear

medicine and PET at The University Hospital. “Our study helps estimate the amount of time following a procedure that these detectors can be triggered.”

The amount of radiation a patient receives in a typical nuclear medicine imaging procedure is comparable to that received from an X-ray and poses no danger to the public. Radiopharmaceuticals are radioactively labeled drugs that interact with specific organs or tissues and can be imaged using specialized cameras and computers. In therapeutic procedures, greater amounts of radioactivity are directed to specific tissues, and patients may be sequestered from the public for several days.

In their study, Zuckier and colleagues estimated the maximum length of time that diagnostic and therapeutic radiopharmaceuticals could set off radiation detectors such as those used for Homeland Security purposes, specifically:

Zuckier supports the recommendations made by the Society of Nuclear Medicine (SNM) and the U.S. Nuclear Regulatory Commission that hospitals develop an official letter or card indicating what type of nuclear medicine procedure a patient received, the date of service and whom to call at the hospital for verification.

“Physicians should make patients aware of the need to carry proper documentation following a nuclear medicine procedure,” Zuckier said.

The U.S. Department of Homeland Security estimates that 10,000 portable radiation detectors have been procured by state, local and federal officials at borders and ports of entry.

Co-authors are Gary S. Garetano, MPH, Matthew A. Monetti, MS, Venkata K. Lanka, MS, and Michael G. Stabin, PhD. ●

2004 Arts Festival

THE NJMS ARTS FESTIVAL, held in September 2004, featured a gallery of artwork created by medical school faculty and staff. Pictured at right is a quilt by Debra Heller, MD, that was part of the exhibit. Heller, who is associate director of the Division of Anatomic Pathology at UMDNJ—The University Hospital and NJMS professor of pathology and laboratory medicine, began quilting six years ago. She says she does it because she loves creating things. Heller has completed so many quilts that she’s lost count, but estimates the number at around 40 to 50. To learn new techniques, she takes classes, joins quilting groups on the Internet, and travels all around the state in search of great quilting shops. “Quilting is a great way to reduce stress, too,” she says. ●



Research News

A look at some ongoing studies at New Jersey Medical School



New Learning and New Memory in MS

Nancy D. Chiaravalloti, PhD, an assistant professor in the Department of Physical Medicine and Rehabilitation, has received two grants to study new learning and memory development in multiple sclerosis (MS).

The first grant for \$1,370,000 is for “Treating New Learning in Multiple Sclerosis (MS).” It is funded for five years by the NIH/National Institute of Child Health and Human Development. Chiaravalloti notes that individuals with MS who have documented memory impairment show a significant improvement in memory following a treatment protocol utilizing imagery and context.

Her current proposal is designed to: (1) replicate the finding and further evaluate the impact of treatment on everyday functioning, (2) observe the effects of non-treatment after six months, and (3) examine the usefulness of once-a-month “booster” sessions.

The second grant for \$428,000 is for “Working Memory in MS: Using fMRI to Identify the Deficit.” It is funded by the National Multiple Sclerosis Society for three years. Many MS patients report difficulties with attention, concentration and memory. Research has shown that these deficits in their “working memory” may in fact be the source of some of these cognitive difficulties.

Working memory can be broken down into two processes: holding information in the mind and manipulating

this information.

Which of these two processes are disturbed in MS is undetermined. This study seeks to identify where these patients are having difficulty.

Identifying Neural Circuitry for Rage and Aggression

Allan Siegel, PhD, professor of neurology and neurosciences and psychiatry, and Steven S. Zalcman, PhD, assistant professor of psychiatry, have been awarded a five-year, \$1,637,188 grant from the NIH/National Institute on Neurological Disorders and Stroke to identify the neural circuitry and neurochemical and neurophysiological mechanisms that underlie the expression and control of rage and aggressive behavior.

The study’s focus is to recognize and characterize the roles of serotonin and cytokines in the medial hypothalamus in regulating these forms of aggression. The hypothesis is that differential cytokine effects upon defensive rage and predatory attack are mediated principally through distinct neurotransmitter receptors of which serotonin and possibly GABA are primary candidates.

The discovery that cytokines in the brain play a significant role in defensive rage represents a most significant observation, providing an entirely new direction of research with a focus that will address how cytokines and related substances in the brain may play critical roles in the expression and control of aggression and rage.

The Genetics of Retinopathy in African Americans

Monique S. Roy, MD, professor of ophthalmology and director of the Division of Medical Retina at The Institute of Ophthalmology & Visual Science, has been awarded a three-year, \$1,419,770 grant, entitled “Genetics of Retinopathy in African Americans with Type 1 Diabetes” from the Juvenile Diabetes Research Foundation.

Diabetic retinopathy (DR) is a major public health problem, particularly for African-American diabetics, who are disproportionately affected.

Roy studied 725 African Americans with type 1 diabetes for risk factors associated with severity of disease (mild, moderate or severe) and observed that not only duration of disease but also three clinical factors—poor sugar control, high blood pressure and kidney disease—are associated with progression to increasingly severe forms of DR. The three clinical risk factors, however, account for only 32 percent of the variability in severity of DR. Roy reasoned that other forces must be responsible.

Since complications due to diabetes tend to cluster in families as well as vary across ethnic groups, she says it is important to study genetic and genetic/environmental factors to account for the severity of the disease. ●

50

THE FIRST FIFTY YEARS

by *Robert A. Schwartz, MD, MPH, NJMS professor and director, Dermatology, and member, 50th Anniversary Committee*

FIFTY YEARS OLD, New Jersey Medical School has firmly established its place on the map of the state—and the country. The first medical school to be founded in New Jersey, its launching was heralded throughout the state, which had long needed a program to educate physicians with strong ties to New Jersey who would likely stay in the Garden State to practice. Among its founders were leaders at the Jersey City Medical Center, Seton Hall University and the Archdiocese of Newark.

Established in 1954 as Seton Hall College of Medicine and Dentistry, located in Jersey City, the school opened its doors to its first class of 80 students in 1956. There was a top-notch pool of excellent New Jersey applicants who vied to be among that charter class; and faculty were reputed to be exceptionally dedicated to the tough undertaking of launching a first-rate medical school where none had existed before. On June 4, 1960, the charter class graduated, becoming the very first MDs to earn their degrees in New Jersey, where most remained to practice.

A decade later, the state purchased the school for \$4 million. In May 1965, it was renamed the New Jersey College of Medicine and Dentistry (NJCMD). In 1968, when state officials were considering relocating the school to Newark, federal, state and local government leaders and representatives of the Newark com-

munity met to work out the historic social contract called the Newark Agreements, which spelled out the college's responsibilities to the city. One result was the establishment of the Board of Concerned Citizens, an advisory group that remains active to this day. On July 1, 1968, the move to Newark was begun.

That month, the New Jersey College of Medicine and Dentistry assumed operation of Newark City Hospital and renamed it Harrison S. Martland Hospital, after the Newark native who served as the hospital's pathologist for 45 years and the Essex County Medical Examiner. Martland, a renowned scientist, made several remarkable discoveries. He determined that minute traces of radioactivity contained in luminous paint had caused the deaths of watch dial painters employed at U.S. Radium Corporation in Orange, NJ.

Martland Hospital became the school's principal teaching facility. The school also established strong ties with the 950-bed East Orange Veterans Administration Medical Center. According to an article celebrating the 40th anniversary of the medical school, published 10 years ago in *New Jersey Medicine*, President Lyndon B. Johnson facilitated this relationship by instructing that the facility be placed at the complete disposal of the medical school.

In September 1969, the New Jersey College of Medicine and Dentistry completed its move to Newark; and on June 16, 1970, the state passed the

Top: Construction of New Jersey Medical School and New Jersey Dental School in 1972–1973.

Bottom: UMDNJ's precursor, Seton Hall College of Medicine and Dentistry, was located in Jersey City.

Medical and Dental Education Act, establishing the College of Medicine and Dentistry of New Jersey (CMDNJ). The new entity merged the previous New Jersey College of Medicine and Dentistry, which included New Jersey Medical School, New Jersey Dental School and the Graduate School of Biomedical Sciences, with Rutgers Medical School.

July 6, 1971 marked the groundbreaking ceremony for the new Newark campus. The first class to begin its studies in Newark was composed of 113 students—28 of them minorities. Construction of the Medical Sciences Building (MSB) began in June 1973, and in September 1977, NJMS moved into its new quarters, featuring 606,000 square feet of classrooms, research laboratories and faculty space. In January 1979, College Hospital (now called UMDNJ–The University Hospital) opened, replacing Martland Hospital.

Since that time, NJMS has made rapid progress. Though young in comparison with most American medical schools, it is quickly moving forward in the area of research funding. Federal awards have increased between FY'03 and FY'04 by more than \$15 million. The Newark campus is in the midst of an enormous capital building construction program, and will soon feature a major cancer center and the first UMDNJ housing for students.

Since its inception, New Jersey Medical School has graduated more than 4,500 physicians. Most have remained in the state. The school and its alumni have vastly improved health care accessibility and quality in New Jersey, particularly in Newark and surrounding Essex County.

Along the way, New Jersey Medical School has achieved national recognition for some of its many

accomplishments. High on the list is winning the AAMC's first award for community service in 1994. Among the others:

- the 1984 founding of an internationally recognized liver center by Carroll Leevy, MD, world-renowned liver disease expert and the school's only surviving founding father;
- the invention by NJMS alumnus Frederick Buechel, an orthopedic surgeon and faculty member of the school, and NJIT professor Michael Pappas, of the first prosthetic knee joint to receive FDA approval;
- the research of longtime faculty member Oscar Auerbach, which formed the basis of the surgeon general's report in the 1960s on smoking and health and led to the 1965 warning on cigarette packages: "Caution: Cigarette Smoking May Be Hazardous to Your Health;"
- the identification of the first case of pediatric AIDS in the world by 1971 alumnus and professor of pediatrics James Oleske in the early 1980s; and
- 19 NJMS faculty members earned spots on Castle Connolly's "2004 America's Top Doctors" list, signifying their stellar reputations among other physicians. ●



What better way to celebrate the 50th anniversary of NJMS than focusing on a few of its many outstanding alumni? Here are profiles of nine graduates who are making a difference.



HOW TO WIN MEDICINE'S GENDER OLYMPICS

MARY HERALD '69

Mary Herald, MD, NJMS '69, is very creative.

She once used a Slinky during a commencement address to Robert Wood Johnson Internal Medicine resident graduates in June 2002 to emphasize the importance of creating a balance in life. Her topic's title: An Excellent Adventure Awaits You. "It was pretty effective," she recalls. "Life is not always predictable and when there is a real imbalance between your personal and your professional fulfillment, with one end pulling the other down, the impact on your life is considerable and you've got to make a change."

As one of only three women students in her medical school class from 1965 to 1969—but the student with the highest cumulative average—Herald established herself as an academic colleague and a force by tutoring male classmates. "They had been asking, 'Hey, how are you scoring so high?' You get better when you teach and reinforce your own learning," she explains. The boys became her buddies.

Twenty years ago, the American College of Physicians (ACP) asked her for advice about recruiting more women physicians. Their female membership numbers were pitiful. This past year, she served as Chair of the ACP Board of Regents, leading the largest medical specialty organization in the country. Herald, who has actively worked to create a more supportive environment for all under-represented groups in medicine, is the first woman to hold this position. "The glass ceiling has been broken. I've encountered a lot of prejudice in my career and it's often the Mars-Venus stuff. Men don't always understand how they are alienating women and women can misread situations due to our cultural differences. Respect, trust and good communication can resolve most issues." Herald also points out that more than 50 percent of individuals coming into medicine now are women. Holding that top spot at ACP was "sweet after a long professional journey."

Early in her career, this creative mother of six had to coordinate her labor and delivery to overlap with assigned vacations. "There was no such thing as maternity leave back then. My oldest was born on October 9 and my vacation started on

October 1. Needless to say, I went back to work really early," she remembers. She and her husband, a professor of bio-ethics and public health, raised a combined family in Summit, NJ. "We have a 'Brady Bunch,'" she laughs. "My three boys joined three teenagers (two boys and a girl). We had some wild years with juggling two careers and the needs of six developing adults. You have to be very organized and a good communicator. You also need a spouse who respects you and is not threatened or jealous of your work. I grew up in an era when women were not supposed to make a lot of waves. We were never supposed to do anything that would make a man feel diminished." In reality, Herald explains, when women offer men that kind of fake environment, never asking them to grow or understand, "men never learn how to be more than they already are. They are diminished."

"I think challenges make you stronger and better," she says. In fact, if it's true that heroes are made, not born, then her 36 years as a female physician in a predominantly male medical world have offered her enough hurdles, high jumps and the long marathon needed to achieve superwoman status. Herald is currently a member of the Board of Commissioners of JCAHO (Joint Commission on Accreditation of Healthcare Organizations); immediate past chair of the ACP Board of Regents; a delegate to the American Medical Association; associate clinical professor of medicine at Columbia University College of Physicians and Surgeons; and an internist/endocrinologist in Westfield, NJ.

Herald speaks often on what she calls the "gender Olympics for women in medicine" and has loved "the national visibility and traveling all over the country." She believes that those hurdles she first described in Yankton, North Dakota in 1993 at an ACP conference, are the obstacles women must go through just to get into medical school, a residency program and then a career. The high jumps are the extraordinary achievements like an academic advancement, a break in research or a position in a national society. Meanwhile, "the marathon is what women physicians run all the time," she says, "balancing the patient care, teaching, research, and responsibilities with day to

day life demands. You need to pace yourself for the long haul.” She admits baking cookies is not her strong suit but treasures her supportive family. “I can cook but they understood my other interests,” she says. “My kids see the joy I’ve experienced with pushing the envelope of professional fulfillment, only possible with sacrifices all around. They feel part of it.”

Once upon a time, Herald was simply grateful that she had a job. “That was dumb,” she says. Having accepted a medical education position because it offered predictable hours and weekends off so she could have time to parent, she never negotiated a contract. “I was undervaluing myself.” She believes that women in medicine are still often “clueless. We are not as sophisticated as men are in the rules of the game for promotion and in recognizing who is really supportive or exploitative.” As more women learn the rules of leadership and power, “we can mentor and share experiences.”

Her own excellent adventure in medicine has not just been in the political arena. “The joy of medicine itself, or the applied science, is what drew me to it,” Herald says. Friends used to tease her about loving the Krebs cycle and the organic chemistry part of physiology. “You want the chance to do a lot of different things in your career, to go into a subspecialty later,

to take additional coursework or mini-fellowships and to make new career decisions. We can constantly refocus our energies if the basic foundation of medicine is good.”

Endocrinology has given her the intellectual room to move through the whole spectrum of complex metabolic diseases from infancy to old age. “We hold the ability to make a difference in someone’s life. We don’t cure everything but we can always provide comfort and ease the burden of an illness. This is what has driven me.”

What you hear in every word of recollection spoken by Mary Herald is the creative, nurturing underpinning of her personality. Nowhere is this aspect more acute than when she describes the sacred space between a doctor and a patient. “The incredibly intimate relationship a doctor has with a patient can be closer than this person has with anyone else in life. This is an inviolate space because you are seeing this patient at his or her most vulnerable time. You provide them with a rudder, a support or a lifeline.” Teaching young clinicians to recognize and respect this sacred space has also been her mission. Her students and medical residents are like partially sculpted treasures, she says. “Inside there is a beautiful, accomplished clinician just beginning to surface. If I can teach





them how to respect the people they are touching and to be confident and caring without being arrogant, I can set the course for their whole professional lives.”

Thank goodness Mary Herald didn't listen to the person who once threatened to ruin her career if she made any trouble. Her hurdles and high jumps have set precedents none of the 215,004 female physicians now in the U.S. would want to have missed. —*Maryann Brinley*

FROM NJ TO LA AND BACK—WITH LOVE

GERALD LEVEY '61

More than four decades after graduating from New Jersey Medical School, Gerald Levey, MD, dean of the UCLA David Geffen School of Medicine and Vice Chancellor for Medical Sciences, sits at breakfast in the dean's conference room at NJMS with a small group of students. He pours himself a cup of coffee, takes his jacket off and puts it on the back of his chair, and makes himself comfortable at the head of the table.

“Would anyone like to start off by asking me a question?” he asks. One student pipes up, saying he is curious about the role Levey played in securing the \$200 million endowment that gives UCLA's medical school its name. Several students laugh and nod their heads—David Geffen's reputation is big! Levey, an NJMS class of '61 alum (it was called Seton Hall College of Medicine back then), smiles. It's probably a question he is asked often and a story he never really tires of retelling—a shining moment for a former Jersey City boy of humble origins.

Actually, Levey and Geffen have much in common. They were both born to working class, immigrant parents, who landed and stayed in the New York metropolitan area. (Geffen is from Borough Park, Brooklyn.) Both families struggled to give their sons a decent start and both men are the epitome of the American dream. Perhaps when they first met over lunch in Los Angeles in 2002, and Levey took the bold step of asking for \$150 million to endow and name the school, a current of recognition passed between them. Maybe Geffen just admired the UCLA dean's “chutpah.”

According to Levey: “Mr. Geffen asked how I arrived at the figure of \$150 million and I told him that we are number 7 in NIH support for research in the entire country and number 4 in overall research and our hospital is always ranked in

the top 5 in the nation.” Even though UCLA's medical school has a reputation to be proud of, Levey was aiming high.

(The Cornell Medical College was named by Joan and Sanford I. Weill for \$100 million and the Keck School of Medicine of the University of Southern California for \$110 million.) But Geffen did not say no—he wanted to think about it.

When they met again, Geffen said he wanted this gift to be the biggest ever given to a medical school—he would like it to serve as an example for other would-be benefactors—and he offered \$200 million. Levey asked that the endowment be unrestricted. The deal was made.

Levey says that as a dean, this gift has given him a lot of flexibility. Scholarships are very high on his list of priorities and he uses interest from the endowment to provide funding for many students who would otherwise have to struggle, or would not be able to attend. “A state school should try to be diverse—it should represent the demography of the state in which it is located as much as possible,” he says. “Half of our students are first generation Americans and many of our students don't have much money.”

Of Geffen, he says admiringly, “He is amazingly philanthropic and has been extraordinarily successful in business.”

Levey may not have Geffen's Midas touch (sources report the entrepreneur to be worth \$2.6 billion), nor his flamboyant ways, but he is a confident man with a grand mission and he is nowhere near calling it a day professionally. “I was in the school's second graduating class, but I don't feel old,” he says to the students, after asking each one to tell a little bit about himself to the group. “I had a great education here. I'm grateful to the school—they gave me a chance. It's impressive to see the buildings going up and to see the school so firmly established.”

The UCLA dean says he decided on his life's work at age 4 because he so loved his pediatrician, who was “calm and wise and had wonderful personal and technical skills, and came to the house and took care of us on the kitchen table.” Looking at his own merits to follow suit, Levey says he was a good student, graduating from Cornell in 1957, but didn't really “catch fire” until he came to NJMS.

For those who know little about the history of medicine in the state, Levey recounts the difficulties encountered by New Jersey residents wanting to pursue a career in medicine.

“There was much discrimination on many fronts in the '50s. Also, since we had no medical school in the state, other

states were reluctant to accept New Jersey students,” he explains. “There was so much excitement about coming to medical school here. We knew that without this school, we would not have had the opportunity to become physicians. We were grateful.”

Even so, not everyone in his class made it. Levey says it was a tough school. Just 80 students were accepted into each class and only 69 from his class made it through.

Of his medical school teachers, he says: “The faculty was small in number and very committed to teaching.” Many left an indelible mark on his life.

Harold Jeghers, MD, professor and director of the Department of Medicine from 1956 to 1966 and a renowned educator and clinician, was an “American legend. He guided me into academic medicine,” states the UCLA dean.

“And Carroll Levey—I love that man. He was brilliant, charismatic, the quintessential investigator, an amazing attending, always pushing you, always wanting you to do better,” he says. “I have both of their pictures in my office.”



He fondly mentions several other faculty members, including Jim McAnulty, who he describes as “very demanding—he lived at the hospital night and day. He was concerned about the students’ devotion to patients and was obsessed with details. He was like a drill sergeant. You hated him when you were there, but you recognized his commitment to excellence later on. And Philip Henneman, the chief of endocrinology, taught me that science and medicine are one and that you can’t divorce them, and that you have to keep learning—read, read, read.” Henneman helped Levey obtain a position at Harvard.

“All of these faculty members were willing to mentor me. I don’t think there are many schools where people can say that,” he comments.

“If you’re going to succeed, you need to have a mentor,” he continues. “Otherwise it’s a very hard climb up the ladder. And when it’s your turn, you have to give people a hand, help them out. I’ve had so much help in my life. I really don’t know why, but some people thought I was worth it.”

Levey completed an internship and one year of residency training in internal medicine at Jersey City Medical Center, where his wife, Barbara, also an MD, came to join him. He did a fellowship in biological chemistry at Harvard Medical School and a senior residency at Massachusetts General Hospital. His research has largely focused on thyroid disease and the heart. His career has included stints as a Howard Hughes Medical Institute Investigator, senior vice president for medical and scientific affairs at Merck & Co, and chair of the Department of Medicine at the University of Pittsburgh’s School of Medicine, before taking on his current post in 1994. He has published more than 200 articles in peer reviewed journals.

Of his medical school alma mater, Levey says: “This has been a highly successful school, graduating more than 4,000 well-trained physicians, with the majority choosing to remain and practice in the state of New Jersey. Its researchers have added to the body of scientific knowledge. The school won the AAMC’s first award for community service in 1994; and it has undoubtedly improved health care in New Jersey, as well as being one of the region’s largest employers.”

To students, Levey says: “Don’t get discouraged. Everyone has a bad day or month, or even a bad year. You picked a fabulous career. What’s going to happen in the future of medicine will be absolutely amazing. You’ll be part of it and your patients will benefit from the medical advances in genetics, robotic and minimally invasive surgery, organ transplantation and stem cell research, to name just a few.” — *Eve Jacobs*

MOTORCYCLE MEMORIES

DONALD ARTHUR '78

There are some people who simply defy stereotypes. Vice Admiral Donald C. Arthur, MD, PhD, JD—United States Navy Medical Corps, Surgeon General, Chief, Bureau of Medicine and Surgery—is one of them.

A military career medical officer and the 35th Surgeon General of the Navy as of August, 2004, he's a gifted speaker, former commander of the National Naval Medical Center at Bethesda, a healthcare leader who preaches the careful preventive road to well-being, and the father of three daughters. This is the type of man who considered leaving the Navy several years ago to enter the ministry so he could go to Ethiopia to be a missionary. "I had been offered the job of heading a Baptist mission service. My daughters weren't so happy about it."

If Donald Arthur sounds like someone who always follows the dutiful, straight and narrow course, think again. Throughout his life, he has mixed and matched his dedicat-

ed, rational side with a penchant for the wild and crazy.

How else can you explain the motorcycle mania? Fellow students from the New Jersey Medical School (NJMS) class of 1978 may even remember him as the young man who spent all four NJMS years on crutches as a result of severely shattering one leg in a motorcycle accident just before first-year classes started. "I had five operations but continued to work for Harley Davidson as a mechanic to pay my way through medical school," he recalls.

His areas of military and medical expertise also tell a story of pushing past what others would consider prudent physical and mental boundaries. He completed a surgical internship as well as two residencies in emergency and preventive medicine. In the Navy, he received operational qualifications in flight surgery and undersea medicine, surface warfare medicine, saturation diving, hyperbaric (recompression) training and radiation health, and he is also qualified for submarines. A Navy-Marine parachutist and jumpmaster, he was head of special products at the Naval Aerospace Medical Institute and was deployed to Southwest Asia with the Marine Corps



Second Battalion during the Desert Shield/Storm conflict. Just before his recent appointment to the top post in the medical office of the Navy, he commanded the Naval Medical Center in Bethesda—the hospital known widely for treating U.S. presidents.

In the Navy, Arthur found what he calls “a community of service” that allowed him to grow and a place to use his knowledge, skills and experience for unselfish purposes. As physicians, “we all have a fundamental decision to make early in our careers: Is our medical degree a commodity to be bought and sold or is it a call to service?” As a doctor, he adds, “You hold life in your hands and can have a profound influence on others.” Arthur believes that a medical degree is one of the most powerful tools of mankind and can’t be underestimated. “You have the chance to impact thousands of lives.” He’s been pleased by “the brightness of people entering the medical profession: young physicians and medical students who are idealistic. When I ask them, ‘Why are you coming into medicine?’ all their answers boil down to: ‘This is all I’ve ever wanted to do.’” Having such a driving force is important because as Arthur sees it, “You may be able to handle medical school because of the pull of prestige or money, but you can’t be a real healer unless it’s all you’ve ever wanted to do.”

His own impact on others is significant. He tells one story in particular to point out how the role of a good doctor can have a rippling effect. Many years ago, during a tour of duty in the Philippines, he used to take a helicopter once a month from his base in Manila to a camp in Luzon where he’d treat refugees. A decade later, when dining alone at a Japanese restaurant in Chicago—the night before taking his boards for emergency medicine—the hidden effect of those monthly visitations became clear.

“Excuse me,” Arthur says while re-telling the tale, “but this gives me the chills. I’ve only told this story twice before to audiences of young physicians.”

The restaurant was one of those where food is prepared and cooked at the table and Arthur soon found himself chatting with the chef. There were only a few people dining.

“Pardon me, but you don’t look Japanese. What nationality are you?” the Vice Admiral asked.

The man replied, “I’m not Japanese. I’m Vietnamese.” Then he said, “And you are the white-haired one.”

“I was flabbergasted,” Arthur says. This NJMS alum does



have white hair. It was nearly white when he was a young doctor in the Philippines. “There in the middle of the United States of America, this man proceeded to tell me how I had impacted his life back in the Philippines.” As it turns out, his family had been in that Luzon camp. The man had grown up in Vietnam, married and had a family but he couldn’t tolerate the political oppression and all the killing in his native country.

“I packed all of our possessions, my children and our parents into a boat and, at sea, we lost everything. We were finally picked up off the Philippine coast and brought to the refugee camp at Luzon you used to visit. Other doctors would come and go, but my family always waited for you. You would treat not just our illnesses. When you came, you talked to us. You cared for our souls, our minds, and our hearts,” the chef said.

This ability to see patients from all perspectives is still evident in Arthur’s life as Surgeon General during American war efforts around the globe. “About 15 percent of everybody in theater (a war zone) suffers from some kind of combat stress,” he believes. “We treat the minds of the wounded and the families, instead of just injuries. I think one of the benefits of our military system is that many of our healthcare providers—our nurses, our corpsmen and our doctors—have been over in the theater, either on the ground or on the hospital ship. They understand where these marines and sailors are coming from. They understand that these marines and sailors are still in combat even though they are in our wards. They are still thinking about and reliving some of their experiences.”

Speaking from a personal platform which includes the Navy Distinguished Service Medal, four Legions of Merit, three Meritorious Service Medals, three Navy Commendation Medals and a Navy and Marine Corps Achievement Medal in addition to unit, service and campaign awards, Arthur certainly understands his military patients inside and out. His intellectual approach to patient care and administrative life is far-reaching.

Yet, even today, stereotypes refuse to fit him. To get out from under the weight of his world, he still gives himself permission to roam free. The last time we spoke, he had just returned from a cross-country motorcycle trip. “I have greasy nails right now from working on my bike last night,” he laughs. After all this time, you can still glimpse that medical student on crutches—the one who was paying for school with Harley Davidson paychecks. —*Maryann Brinley*

TO KEEP UP WITH THIS SURGEON: SPRINT

DAVID DINES '74

Like the superstar athletes he treats, world-renowned orthopaedic shoulder specialist and medical inventor David M. Dines, MD, moves so fast that he sometimes leaves listeners racing to catch up intellectually. Even the hours in his day can add up to more than 24. Dines laughs about this mathematical conundrum. "I guess there are only so many hours in the day but..."

Dines' curriculum vitae highlights his many roles in teaching, clinical care, administrative duties and research. This 1974 graduate of New Jersey Medical School (NJMS) developed one of the first modular prosthetic shoulder implants in 1989. Former team physician for the New York Mets and the current doctor for the U.S. Open tennis tournament and the Davis Cup team, he's the guy who gets injured major league baseball stars and tennis pros back out to their fields, not just



to play, but to points where they win comeback player of the year and the U.S. Open. "I've treated many famous athletes and without mentioning any names, it's been unbelievably gratifying."

Not only have baseball and tennis players benefited from his expertise but boxers and soccer teams are among his professional sports affiliations, as well.

"I've been blessed," he says. "These are all labors of love." In fact, this veteran surgeon says, "I've been very fortunate. I'm in a subspecialty where I get to take care of people—not just athletic stars but patients who are my neighbors, my colleagues and my friends—and bring them back to productive lives. I don't necessarily have to deal with life and death medical concepts. I think what we do in orthopaedics is difficult; however, being able to help someone play tennis or golf or even to function, is not the same as keeping that person alive. I truly give credit to my colleagues who are in the trenches taking care of problems like heart disease and cancer. I'm practicing a very happy type of medicine."

Happy is a word which comes up often in conversation with Dines, especially when he describes events of this past year. In October, he became president of the American Shoulder and Elbow Society. Last March, he and a team of researchers at North Shore—Long Island Jewish (LIJ) Medical Center won the prestigious Charles S. Neer, II, MD, Award, which recognizes outstanding investigation that contributes to the understanding, care or prevention of injuries to the shoulder or elbow. An annual prize established in honor of the first shoulder expert (Charles S. Neer, II), "This is like winning an Academy Award or an Olympic event but for shoulder surgeons," Dines explains. His team won for their work growing tendon cells in the laboratory, injecting these cells with genes for growth factors and then implanting them to heal soft tissue injuries. In their laboratory model, healing began to occur within 24 hours.

Dines believes that the distant future of orthopaedics lies in technologies that minimize the amount of insult to the body. "In the next 50 years, not just in orthopaedics, but in many medical subspecialties, we will work at the micro-cellular level. A lot of conditions treated surgically will have non-interventional, gene-modulated approaches. Way down the road, instead of doing hip or shoulder replacements, we may be able to take a tissue sample from the patient, grow a new hip or shoulder outside the body, and then put it back in."



For the near future, Dines foresees smaller and smaller implants and even less extensive arthroscopic procedures. “As with all surgery, and specifically orthopaedics, the concept is: do more with less invasion.”

His Biomodular Total Shoulder implant (Biomet, Inc., Warsaw, Indiana) was developed more than 10 years ago with Russell F. Warren, MD, and continues to be the standard for every new shoulder prosthesis in development by other researchers. “We’re revamping ours,” Dines says, “but it is still one of the most popular ones.” This invention propelled him to center stage in 1996 when he was asked to deliver the prestigious annual Sir John Charnley Memorial Lecture in Liverpool, England. “Charnley invented total hip replacement,” Dines explains. The Liverpool lecture “is the biggest honor in orthopaedics and I was the first shoulder replacement expert to be invited.”

An athlete in his own right, Dines played football as an undergraduate at Lehigh University, joined the first rugby team while at NJMS and enjoys a lot of tennis and golf. As a surgical patient, he has experienced the revolution in orthopaedics personally. “I have had two back operations, laminectomies, performed 10 years apart. You used to go into the hospital for five days. Now it’s a minimally invasive procedure and you can leave an hour later.”

Chairman of orthopaedic surgery and program director for the medical residents at LIJ, he is also clinical professor of orthopaedic surgery at The Albert Einstein College of Medicine, assistant clinical professor at Cornell University Medical College, and assistant attending in orthopaedic sports and shoulder service at the Hospital for Special Surgery in New York. “I’ve done so many neat things,” he recalls. “Orthopaedics is a great specialty because you have the mechanical side, the academic side and you also have patient interaction with all different age groups.”

With more than 100 articles, 20 book chapters and approximately 500 presentations to his credit, he’s also married and the father of two children: a daughter, Allison Kate, who has a career in Florida, and a son, Joshua, who surprised Dines and his wife, Judy, with a senior year decision at Dartmouth College to go into medicine. “I never pushed my beliefs on him in any way, shape or form,” Dines says. “Suddenly, he just wanted this for himself, not because we wanted him to go into medicine. He was lucky enough to be able to make the change academically. He went to Cornell Medical School and is now a fourth year resident in orthopaedics at the Hospital for Special Surgery.”

Requests for Dines to speak have taken him around the world three times—to Denmark, Italy, France, and Spain—but perhaps one of his most memorable presentations took place at the University of Tokyo in Japan. He doesn’t speak Japanese. “I have a tendency to talk fast and my translator and I had trouble getting into sync,” he admits. “I realized at one point in my presentation that the audience had no clue about what I was saying. They were looking at my slides being projected but the translation, it turned out, left a lot to be desired because the translator couldn’t keep up. He was two sentences behind and losing ground.” The truth is: if you are going to keep up with this superstar shoulder specialist and not get lost in translation, you need to be able to sprint.

—Maryann Brinley

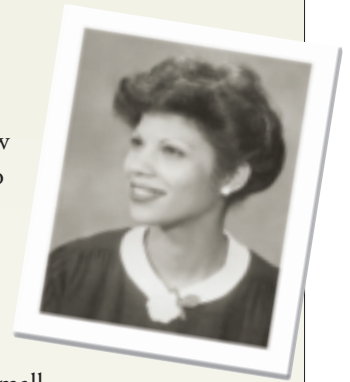
AUTHOR, AUTHOR

JO-ANN RETEGUIZ ’83

Jo-Ann Retegui—doctor, teacher, author, collector—sits at her home computer steadily tapping at her keyboard. With five published books to her name, and a day-job that demands 60-hour-minimum weeks and gives her the ultimate responsibility for professional preparation of 115 residents in the Department of Medicine, as well as 175 third year students who rotate in batches through her medical clerkship program in the department each year (all of whom she knows by name), her plate is rather full. Add to that her love for reading medical history books and literature, and her hobby of searching out antique medical instruments and first editions of medical texts for her collection, and you might agree that you’re meeting a modern day “renaissance” physician.

Just put her name into your Google search engine and you’ll find that her titles pop up on every bookseller’s Web site. Her second published work, *Mastering the OSCE* (Objective Structured Clinical Examination) and *the CSA* (Clinical Skills Assessment), published by McGraw-Hill/Appleton & Lange in 2001 with co-author and former resident Beverly Cornel-Avendano, MD, is number 16 on Amazon.com’s top sellers in the “Medicine/Physician and Patient” category. That’s quite a feat! Eight reviews posted on the site rate the “bestseller” an average of four-and-a-half stars out of five.

This is actually the second edition of her very first book, *Mastering the OSCE/CSA: Objective Structured Clinical*



educational process are just a few of the qualities that she brings to the table.

Reteguiz set her sights on medicine at the age of 5, adopting as her model a “country-type” doctor in her native Brooklyn, who worked seven days a week in a small office in a poor neighborhood. She worked her way through St. Peter’s College in Jersey City, where she majored in biology but “took as many writing and literature courses as I could,” and also through her first two years of medical school. Looking back, she says, “It was a struggle, but well worth it.” After completing her residency in internal medicine at NJMS, and staying on an additional year to serve as chief resident at the Veterans Administration Medical Center in East Orange, she was certain that medicine and teaching would be her life’s work; and her alma mater recognized an up-and-coming talent and gave her the opportunity to show her stuff.

The rest, as they say, is history. In 1995, Reteguiz became coordinator for the medicine clerkship, the course, she says, that had the greatest influence on her professional life and that, as a student, she hoped one day to teach. She counts among the top achievements of her career her overhaul of the curriculum for this course, which is now entirely case-based, no lectures and no slides. Its goal is to provide third-year students with the clinical skills for solving problems and making decisions related to patient care.

Why has she sparked such enthusiasm among her students? “I get students to listen, reflect and respond,” she says. “I don’t allow belittlement or humiliation in the classroom. Every point of view is heard. I believe in leading students to the right answer—they will get there. And it is mandatory that we laugh along the way.”

Her books are actually gifts to her students. Perhaps there is a novel or a collection of short stories in her future, but so far, she has concentrated on enhancing her students’ preparation for their careers. Her first effort was launched because “third year students would ask me how to study—there were no books on the market—for the standardized patient exam.” Book number two was written specifically for second year students and is an introduction to the clinical sciences. “Knowing your target audience and knowing how they’re examined” are the crucial factors for this kind of writing, she says. She is now focusing her efforts on a textbook for third year medical students in the medicine clerkship which is read-

Examination/Clinical Skills Assessment, which was published by McGraw-Hill in 1999. The author recounts her initial experience with the publishing world and, oddly, it was a very good one. She decided to market her own book rather than pitch it through an agent. After completing five chapters, she sent her manuscript to three publishers and all three made her offers. She chose to go with the only one willing to meet with her in Newark. “I liked the personal touch,” she says.

Just in case you were wondering, eight months is the amount of time it took her to write that first book—that’s eight months of nights and weekends—and she edits her own writing again and again along the way. The book was the first comprehensive study guide for the standardized patient exams (a required “pass” for all third year students) and includes more than 50 simulated practice cases in all specialties.

How did the 1983 alum of New Jersey Medical School (NJMS) become a published author, University Master Educator, eight-time winner of the student-nominated Golden Apple award for teaching excellence and Vice Chair of Education of the NJMS Department of Medicine, all in less than two decades after completing her residency? Her quiet, determined passion for what she does, her dedication to the task at hand and her respect for students and for the

able in 12 weeks, the length of their rotation. Existing textbooks are far too long for most students to find useful for this rotation, she explains.

The third edition of her first book, now renamed *Mastering the USMLE, Step 2, CS Examination*, was published in November. “This is a new title and it’s for a new exam,” she explains. It required her to rewrite 50 percent of the text. Not a problem, she says, because “I enjoy the process of writing.”

Reteguiz undoubtedly has her finger on the pulse of medical students’ academic needs and she has discovered a winning formula to meet those needs. She receives emails from students from all over the world, offering criticisms (not many), praise and suggestions. She answers all emails and incorporates many of the students’ suggested changes into her revisions of the volumes. Ultimately, her goals as a writer are much the same as her goals as an educator: “to give medical students and residents all of the tools they need to be among the best doctors in the world.” At NJMS, she accomplishes this in an environment that’s optimistic, positive and caring. At the end of the day, what she wants to know is that “somehow I contributed to bettering the health of New Jersey by educating a couple of generations of physicians whose training was superb.” —*Eve Jacobs*

PHILOSOPHER AT WORK

BENJAMIN WILFOND ’85

Chatting by telephone from his office at the NIH’s Department of Clinical Bioethics, Benjamin Wilfond, MD, sounds like a man who is happily in the right place at the right time. He would certainly catch a glimpse of himself in the Oxford American Dictionary’s third definition of the word philosophical: “searching, by logical reasoning, for an understanding of the basic truths and principles of the universe, life and morals, and of human perception and understanding of these.” The New Jersey Medical School (NJMS ’85) alum wrestles on a daily basis with “the basic truths and principles” of medicine and “human perception and understanding of these,” and feels very lucky to be able to do so.



An equal love for biology and philosophy fueled Wilfond’s undergraduate years. He knew he wanted to become a physician, but how to marry these two, seemingly divergent interests in a future profession was his “dangling” question. While at NJMS, he became active in the American Medical Students Association, serving as co-president of the local chapter and then holding a spot on the National Board of Trustees. The organization, which he says encourages student activism and tries to fill in the gaps in medical education, gave him the nod when he introduced the idea of forming a national committee on bioethics and developing a videotape on the ethical issues facing medical students. He spent two rotations in his fourth year—one at the Hastings Center



writing scripts and one at Stanford University working with a medical student who was also getting a graduate degree in film—to produce the video. It includes short vignettes based on ethical dilemmas he faced as a student: what to tell a patient when doing the first lumbar puncture; how to respond to a patient who wanted more information about a scheduled liver biopsy that would not affect clinical management; how to advocate for a patient with terminal cancer who wanted to go home, but whose family wanted the patient to stay in a phase I clinical trial. He says that, 19 years later, he still shows the tape to students and mulls over the same hard questions.

Wilfond completed a pediatrics residency and a pediatric pulmonology fellowship at the University of Wisconsin. He initially set his sights on practicing primary care pediatrics where “kids almost always get better,” but during residency, found himself more and more attracted to dealing with “chronic and complicated” scenarios “where families are in messy situations that don’t always get better,” he says. In 1989, at the beginning of his fellowship, he was advised by a mentor to focus on the ethics of molecular biology. “He said, ‘The cystic fibrosis gene will soon be identified and you need to think about that,’” recalls Wilfond. Just one year later, the budding bioethicist turned a failed grant application into a winning paper entitled, “The cystic fibrosis gene: medical and social implications for heterozygote detection,” which was published in *JAMA*. In the paper, he argued for clinical studies to assess the benefits and risks of screening before widespread introduction of carrier testing during pregnancy.

That was the real beginning of his active involvement in cystic fibrosis genetics and the field of bioethics. On the faculty of the University of Arizona in Tucson for six years, he became steeped in the world of academic medicine, happily combining teaching, research and patient care. But in 1998, a position at the new Department of Clinical Bioethics with the National Genome Research Institute of the NIH caught his eye and held out the promise of spending more of his time and energy doing what he loves best. This job, he says, is “80 percent research—thinking and writing about conceptual issues.”

Life at the NIH has been good for Wilfond. “Every day I pinch myself because I can’t believe it’s happening to me,” he says. “It’s incredible—I’m paid to think about whether what we are doing is right, and if there are better ways.”

He developed an interest in newborn screening that began during his fellowship because the University of Wisconsin

was conducting a study of CF newborn screening. He has continued to ask questions about the scientific and ethical issues in deciding what tests to add to newborn screening panels. With technological advances, commercial interests, professional enthusiasm, and patient advocacy, the list could become endless. He says that this will be an emerging dilemma as public health and genetics converge.

He calls much of his work “descriptive,” which “involves collecting and organizing quantities of information.” He has recently completed a survey of 12 states doing cystic fibrosis newborn screening and has documented the range of variability in the different approaches. “Good ethics begin with good facts,” he says, quoting one of his mentors, Dr. Norman Fost from the University of Wisconsin.

He has been interested in the commercialization of genetics and recently published a paper in *JAMA* on limitations of the direct-to-consumer marketing of genetic testing. He also published a survey of internet sites that allow the public to buy genetic tests directly. Another current project is looking at the variations in the genetic screening panels that labs are offering Ashkenazi Jews. He has found that these panels include anywhere from two to nine tests and that there are generally price disincentives for choosing to exclude any particular test from the panel. His question: Is pricing structure conducive to people deciding what’s best for them or is money driving the decision?

Since coming to the NIH, he has been looking at issues of involving children in research. For example: Under what circumstances are placebo-controlled clinical trials involving children with asthma ethical? This project showed that children in placebo arms (who were not given standard therapy) were twice as likely to have an asthma exacerbation, and he questioned the withholding of standard therapy when the benefits are clear. However, he points out that when the benefits of new or even standard therapy are not clearly established, controlled trials are both scientifically and ethically justified.

He is also interested in understanding what information people want to know before participating in a clinical trial. Wilfond says that consent forms are growing longer and denser as medicine becomes more complex and less easy to comprehend. “What information is relevant?” he asks.

As the NJMS alum looks back, he “philosophizes” about his education: “Certainly the medical school had an impact on the direction of my career.” He fondly recalls several faculty members who encouraged him to forge his own path:

David Price, PhD, whose “Ethics for Lunch” series inspired the young student; Jacob Lindenthal, PhD, the “coolest guy, so smart and so serious about his interest in the social sciences;” Adele Brodtkin, PhD, a child development specialist, who supported his interest in making the videotape; Steven Simring, MD, who helped to make psychiatry “my most intellectually interesting subject;” and Franklin Desposito, MD, a pediatric geneticist who was his attending on his first rotation of his third year and a “really good guy—he left an impression. Our paths have continued to evolve and cross.”

Wilfond has returned to his alma mater to receive the alumni achievement award in 2003 and as featured speaker at the AOA medical honor society induction ceremony in 2004. After a long hiatus of not having much involvement with the school, “I can look back and see that it helped me move in the direction I wanted to move,” he muses. Philosophically speaking, he is beginning to “perceive and understand” the place of those four hard years in the unfolding story that is his life. —*Eve Jacobs*

JERSEY GIRL MAKES GOOD

BARBARA-ANN BRITTEN '97

Barbara-Ann Britten, MD, does things her own way. In her office, no one is ever rushed. “I don’t see patients in five minutes,” she says. “I spend an hour on a physical, and 20 minutes for follow up visits. I’ll never be a rich doctor, but I’m a happy one.”

Britten specializes in internal medicine, which in itself is not unusual. What makes her unique is her background as a scientist and teacher, and the tenacity with which she pursued her dream of becoming a physician. The Newark native graduated from Rutgers–Newark in 1970, but didn’t go to medical school until two decades later. What happened along the way? “Let’s just say I hit a few road blocks,” she says with a laugh. “But it doesn’t matter, because I’m here now.”

Here is Hackettstown, where she has built a successful solo practice in only four years. “I love my patients, and I



have a great rapport with them,” she says. The feeling is mutual. In 2003, she received the Physician of the Year Award at Hackettstown Community Hospital.

Medical school was always in Britten’s plans. As an undergraduate at Rutgers–Newark, she considered majoring in one of the life sciences, but switched to mathematics when fellow students said how difficult the sciences were. “I was afraid I wouldn’t be able to keep up,” she says.

In college she was required to do community service, so she volunteered in the lab at St. Elizabeth Hospital in Elizabeth. “I loved being in the lab,” she says, “so when they offered me a part-time job, I accepted it.” She realized changing majors was a mistake, so she switched to zoology/premed. Now she had to take the most difficult courses—organic chemistry, physics, and physiology—all in the same semester. “My grades were not spectacular,” she says.

Following her graduation, she applied to medical schools, and was accepted at only one, in the Philippines. Her family had limited funds, but a generous gift of \$1,000 from her family physician, Dr. Joseph Peyser, enabled her to enroll. Her sister purchased her a “fly now, pay later” ticket and she took off, landing many hours later “in the middle of a monsoon.”

Unfortunately, Britten and her family did not fully understand the exchange rate in the Philippines. Two months into the semester, she ran out of money and had to return home. “I was disappointed, but realized it would have been very hard to learn there,” she says. “The labs had no running water, and some of the classrooms had no lighting other than light shining through the windows.”

She returned to St. Elizabeth Hospital and was offered a job as supervisor of the hematology lab. She also enrolled at Seton Hall University, studying for her master’s in biology at night. It was here that she met her husband, Tom, a fellow scientist who was doing research on autoimmune diseases. The two married in 1973.

Britten had two children and stayed home with them. She completed her master’s in 1983. Her husband did further work on his PhD, then started his own research and diagnostic company, Scimedx, which he owns and runs today.

In her 30s, a wife and mother, Britten felt that medical school was out of her reach. She enrolled in a PhD program in physiology at Rutgers and initiated her own research projects. In 1985 she became a research teaching specialist at UMDNJ–Robert Wood Johnson Medical School, teaching gross anatomy and histology to first year students. That year, she also presented her research in Bell’s palsy and antigen-

glioside antibodies at the American Association of Anatomists’ annual meeting.

She finished her PhD course work in 1987 and continued to teach. “Teaching was very rewarding, but something was missing,” she says. “I still had this dream of becoming a physician.”

In 1990, as her daughter was getting ready to go to college, Britten felt the tug of medical school even more strongly. She met with Dr. Joseph Tassoni, then the director of admissions at NJMS. “He asked me, ‘Do you have enough energy for this? You’re 40 years old.’ I said I did. He told me to prepare for the MCATs, and if I got all 12s, he’d take my application.”

Getting 12s—the maximum score—was an unattainable goal, but she studied hard. “I didn’t get 12s, but I did pretty darn well,” she laughs. “So I applied anyway.”

That year, she made the waiting list, but unfortunately, was not accepted. So she applied again the following year, and was wait-listed once again. “I was convinced they thought I was too old, or maybe having a mid-life crisis,” she said. “But I had good grades, good test scores. I decided to give it one more shot.”

She was wait-listed again, but refused to give up hope. She’d started wearing a pager just in case the admissions office tried to get in touch with her. “They call you if a spot becomes available,” she explains. “If you’re not there, they call the next person on the list.”

One day she was home and the phone rang. She didn’t get to it in time. Immediately afterward, her pager went off. “My heart started to pound,” she says. “Sure enough, it was a member of the admissions committee, offering me a spot. Did I still want it? I said, ‘Definitely!’”

Her husband had bought a special bottle of wine in France, saying they would only open it when she got into medical school. She put the wine in a shopping bag, drove to her husband’s office, and they toasted her acceptance.

Britten held the distinction of being the oldest student in the class of 1997. “On Mother’s Day, many of my fellow classmates sent me cards!” she says. “I was perfectly fine with being the oldest. The students treated me like I was one of them.” She and her husband enjoyed having parties for the students at their home in Long Valley, setting up tents and serving food. “We had a lot of things to celebrate along the way,” she says.

She was also one of the most outstanding. She consistently made the dean’s list, was elected into the Alpha Omega Alpha Medical Honor Society, and was president of the Student Council. She received several other awards as well,

including the Drs. Milton and Rose Prystowsky Award for overall excellence in patient care, and the Dean Charles Brown Award for her significant contributions to NJMS. She did her residency in internal medicine at The University Hospital and received the Resident Achievement Award for excellence in patient care, teaching and leadership.

Britten has continued to stay involved with her alma mater. She is assistant clinical professor of medicine at NJMS and serves as Vice President of Post Graduate Affairs for the NJMS Alumni Association.

She says, "I'm a lucky woman—I get to do what I love. I attribute my success to my husband and my parents, who taught me that you can do anything if you want it badly enough, and work hard enough to get it." —*Mary Ann Littell*

NJMS HAS PRESENCE IN IRAQ

JEFFREY UPPERMAN '91

When he's not doctoring, Jeffrey Upperman, MD, is serving his country. In his professional life, he is a pediatric surgeon at Children's Hospital of Pittsburgh. He's also a major in the U.S. Army Reserve, and recently finished a stint in Iraq.

A Reservist since 1992, Upperman says New Jersey Medical School faculty member Kenneth Swan, MD, was instrumental in motivating him to join. Swan, who was profiled in the last issue of *NJMS Pulse*, is a long-time member of the Reserve, and has inspired many students (by some accounts, more than 100) to join too. "I'm indebted to him for his guidance and help, and for his sense of patriotism which he also instilled in me," says the surgeon.

Upperman served in Iraq for four months, from April to July 2004. It was his first deployment, but probably not his last, since he has committed to serve until the year 2011. He was part of a medical team that performed major surgery under very harsh conditions. He was stationed at Abu Ghraib prison, the site of the much-publicized abuses against Iraqi prisoners of war. "Unfortunately, those isolated incidents have overshadowed the good work being done by many wonderful young people who are defending their country," he says.

The physician, who hails from Plainfield, received his undergraduate



degree at Stanford University. He returned to his roots to attend medical school, and also did his general surgery residency at The University Hospital. Along the way, he completed all of his course work toward a PhD in anatomy, cell biology and injury sciences at UMDNJ–Graduate School of Biomedical Sciences.

From June 1999 to June 2001 he did a fellowship in pediatric surgery at Children's Hospital. What drew him to Pittsburgh was a chance meeting with Dr. Henri Ford, chief of the division of pediatric surgery at the University of Pittsburgh School of Medicine. "He has an outstanding track record in training physicians who are also researchers and scientists," he states. "That's what I wanted to do."

After finishing the fellowship, Upperman became part of the attending staff at Children's Hospital. He is involved in research, and has a grant from the Robert Wood Johnson Foundation to study necrotizing enterocolitis (NEC), a disease affecting some 5 to 7 percent of all premature babies. In babies with NEC, the intestinal tract becomes inflamed, often leading to gut barrier failure. Up to half of those affected will die. "We can keep tiny infants alive at

23 or 24 weeks, but unfortunately, more and more of them are at risk for NEC,” says Upperman. “The challenge is finding out who is susceptible, and why.” The researcher is now collecting DNA samples to see if there is a genetic link.

Upperman is also something of a consumer advocate. As a pediatric surgeon treating trauma patients, he is troubled by the increasing incidence of young people injured on all terrain vehicles, or ATVs. So he’s working with the Consumer Federation of America to prevent these injuries.

“Since 1998, the number of children who have been injured in ATV accidents has more than tripled, and the injuries are more severe and often lead to death,” he says. “Children and adolescents should not be riding ATVs.”

The surgeon’s special memories of his years at NJMS include the camaraderie and community spirit of the SNMA, or Student National Medical Association, an organization he joined. He also says he is thankful for the support and encouragement he received from his mentor, Robert L. Johnson, MD, professor and chair of the department of pediatrics at NJMS (see page 40).

Upperman’s wife, Bevanne Bean Mayberry, MD, is also an NJMS alum (class of 1996). She is an assistant professor at the University of Pittsburgh and a staff physician at the VA Pittsburgh Healthcare System. The couple has three sons ages 2, 4, and 7.

Of his possible return to Iraq, Upperman admits that it’s very hard to leave his family and work behind and head into danger. “But if I’m needed,” he says, “I’ll go back and do what I signed on to do.” —*Mary Ann Littell*

THE BALLAD OF DAVID LUNT

DAVID LUNT '01

Heroes in traditional folk songs and epic poems often encounter obstacles on the way to achieving goals. The ability to endure trials, rejections, nearly endless journeys and to spend decades searching intellectually for life’s answers is what makes the character so compelling. Listeners want to hear about the adventures and, at long last, the happy ending.

David Lunt, MD, NJMS '01, could easily be a hero in one of the ballads he likes to sing while playing his guitar. A musician and the oldest graduate in the 50 year history of the medical school, Lunt was 54 when he achieved his happy ending of becoming a doctor. Looking back over his life from

a seat in a western New Jersey medical practice called “The Doctor Is In,” Lunt laughs, “I’m more than happy that this turned out to be what I was meant to do.” His medical group, with offices in Clinton, Phillipsburg and Flemington, is a combination of urgent care and traditional family practice medicine. “We see lots and lots of trauma, sniffles and sneezes because we’re open when typical docs’ offices are closed.”

Lunt loves what he is doing and therein lies the surprising denouement to his remarkable tale. His life now “never ceases to amaze” him.

As a pre-med undergraduate at Cornell University in the late 1960s, “I took the music route,” he admits, earning only B minuses and C pluses. “I thought those grades weren’t bad for someone not even going to class,” he says. “I never really gave up on the idea of medicine. I just discovered entertaining.” With college friends, he formed a group, “The Laughing Stock,” that was even good enough to land a contract with ABC Paramount Records. After graduation, they toured the east coast of the U.S. for several years. “We never actually had any records produced because we were young, arrogant and had artistic differences with the recording company,” he chuckles. Lunt laughs so often you begin to see why they called themselves “The Laughing Stock.”

In his 30s, he returned to thoughts of medicine only to be told that he was already too old to apply. “I never really gave up, though,” he admits. “The idea just faded for awhile.” By 1973, after following his musical inclinations for several years, Lunt took a job with the Social Security Administration (SSA) in Washington, DC. “Performing had become harder to do and I needed a steady income with benefits because I was getting married. I thought I’d spend just a few years there.” The SSA, in fact, turned into a 23 year, long-term “gig,” he says.

Approaching his mid-40s and going through an amicable divorce with no children involved, Lunt looked at medicine once again. He went back to school to see if he could still do organic chemistry and started studying for a Masters in Public Health, a route into medicine that had been suggested to him.

As an older student, he was gratified to know that his brain still performed under pressure. “You probably have to work a





little harder to nail the knowledge down but not so much so that your age makes it an impassable obstacle.”

Then, he began applying to medical schools throughout the country, only to be turned down six times. The year NJMS finally accepted his application, he had actually anticipated rejection. “I assumed that another cycle had passed me because I didn’t get a call until a month before classes began. A spot had opened up. I was watching ‘Cheers’ on television when the phone rang.” He was so happy that he “danced around in the middle of the room and called everyone I knew.”

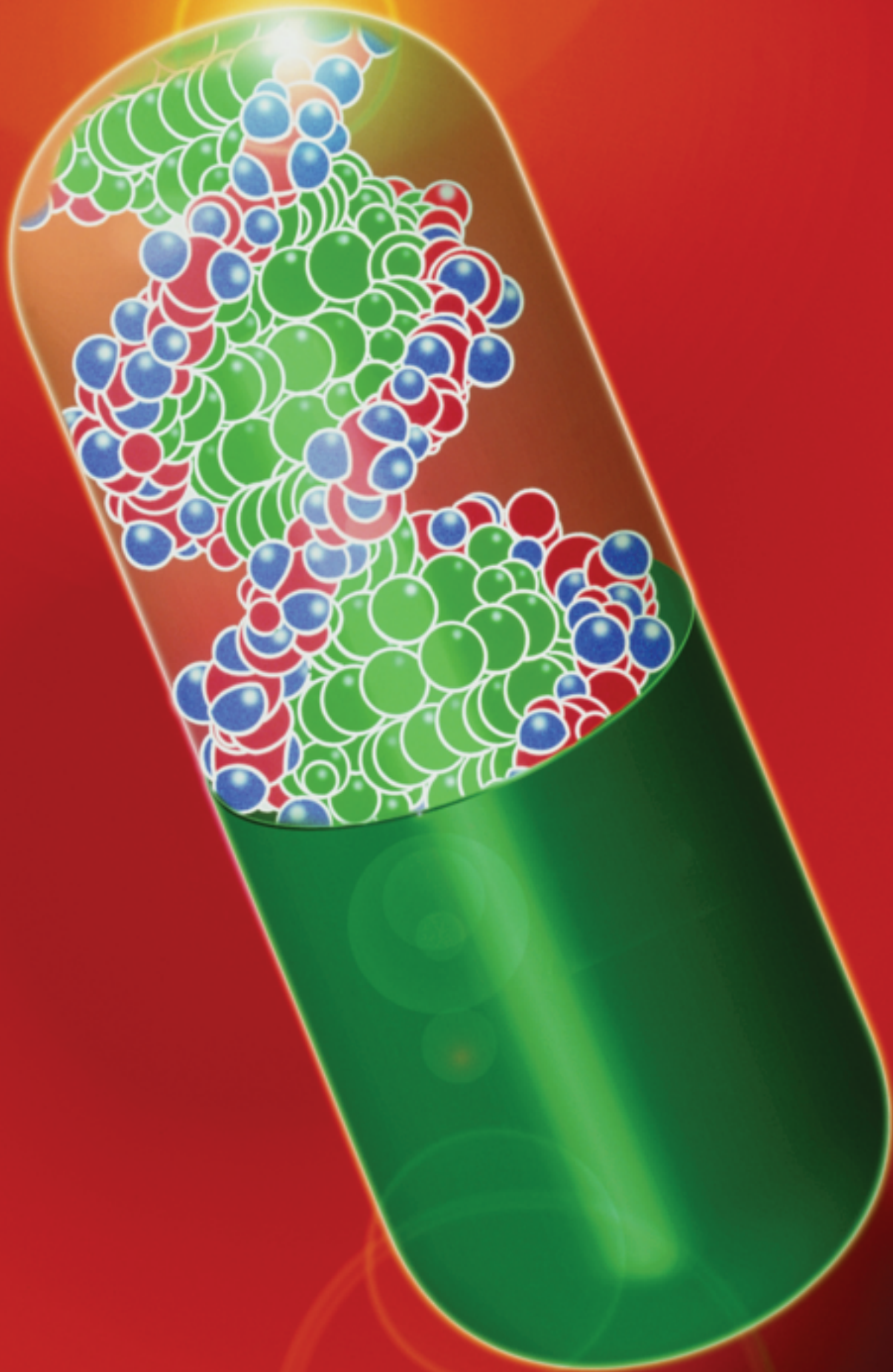
As a medical student, Lunt says, “I had a great time. I enjoyed my classmates and didn’t find much of an age barrier between us.” In fact, along with three other students—Ethan Nash, Gautam Malhotra, and Jondavid Jabush—Lunt, a baritone, formed a quartet known as the Lymph Notes, which performed at campus functions and in local spots.

Now that his long hours as a resident in family practice at the Hunterdon Medical Center are over, he almost has enough time for a regular music gig. “I’m looking for one right now. I still play every St. Patrick’s Day at a bar, singing Irish music, country and folk ballads.” Yet, what motivates

him more than music is the fact that being a doctor lives up to what he always hoped it would be. “That was one of my greatest fears going into medicine. I was making this huge commitment at a point in my life that made me worry: What happens if, when I get there, I don’t like it?”

Lunt laughs about some of the crazier experiences as a physician. Not so long ago, he received a telephone call from a hunter who was in a vehicle two hours away in Pennsylvania driving on Route 380. “This guy had a hunting knife stuck in his chest. He was with a friend and they wanted directions to our office.” There had been an accident and they assumed that an urgent care center could handle anything. “We’re not an ER,” Lunt points out. “I told them to pull over, call 911 and get to the nearest hospital.”

In *The Ballad of David Lunt*, rescuing a wounded hunter from poor thinking is certainly not an episode that would have appeared early in the song. But that makes this music in the sixth decade of life even sweeter. Says Lunt, “The closest thing I can compare this feeling to is a calling, and while I know that’s a word which is used a lot, for me, it’s the truth.” —Maryann Brinley ●



WHAT'S IN A NAME:

pharmacogenetics

BY EVE JACOBS

THE WORD PHARMACOGENETICS may roll off the tongue as if it were in our everyday lingo. But, in fact, the art and the science of this specialty are so new that most physicians who earned their MD more than five years ago never heard of it during their many years in school. And the genetics field that spawned this new arm is moving forward at such enormous speed that even those with some cursory knowledge will find themselves behind the eight ball in a very short time.

Pharmacogenetics is simply defined: the study of how an individual's genetic inheritance affects the body's response to drugs. It was birthed by the massive undertaking called the Human Genome Project, which gave us two "great surprise discoveries," according to Marvin Schwalb, PhD, director of the NJMS Center for Human and Molecular Genetics. "There are only about 30,000 human genes, not 100,000 as was previously thought," he says, and "the degree of variation between unrelated humans is greater than was previously assumed, between two and three million base pair differences."

He explains that most of these differences have no medical consequence and that those considered medically significant often do not cause disease, but may bring about what has been termed a "predisposition syndrome." The best example of this, the geneticist says, is a polymorphism—or sequence variation—in the blood-clotting factor gene called Factor V. This polymorphism has been named Factor V Leiden and is present in 5 to 7 percent of the population. People who have this autosomal dominant trait have a substantially increased risk of clotting problems, such as deep vein thrombosis and pulmonary embolism. "But some additional stress, such as surgery, pregnancy or flying to Australia, is needed to set off the problem. This is a very different concept from our traditional thinking about disease," Schwalb points out.

There are a host of other predisposition syndromes, accord-

ing to the geneticist, only some of which have been identified so far. "This is just the tip of a giant iceberg," he comments. "Many others will be found soon." He says that in the not-too-distant future, scientists will be able to identify who is at high risk during their life spans for such major health concerns as diabetes, hypertension and cardiovascular diseases. Since another environmental event is required to set things off, this knowledge could prove very useful. Someone could be advised to take special precautions, for instance, after surgery, or make lifestyle changes, Schwalb suggests, or there might be a medication, to be taken before someone is symptomatic, that could delay or ward off the disease entirely.

There is another variant in a blood clotting gene, prothrombin, which also affects up to 5 percent of the U.S. population. The polymorphism is called Prothrombin (PT) 20210. For those individuals who have the Prothrombin variant in combination with Factor V Leiden the increased risk for deep vein thrombosis or pulmonary emboli are 80 to 100 fold, Schwalb explains. "This is as dangerous as breast cancer in terms of mortality," he points out, "and in most cases it is now diagnosed on the autopsy table. If a clot is big enough, and the lungs can't accept oxygen, it's like being suffocated internally. It happens so quickly—in five minutes someone is dead. The good news is, if you know of the genetic risk, there are simple and effective therapies to greatly reduce the risk."

Diagnosis and patient management are the two areas where genetic information has and will continue to have a significant impact on people's lives, Schwalb states. But in the area of diagnosis, cost is still a major deterrent to offering certain tests to large numbers of pre-symptomatic individuals, he explains.

Although the technology to analyze genes has dramatically improved over the last few years, "Big genes with lots of mutations can cost thousands of dollars to analyze," he says. "For instance, the BRCA1 and BRCA2 genes, which can disclose an inherited predisposition to breast and ovarian cancers, are large and may have more than 800 mutations between them. To completely sequence one of these genes can cost up to \$3,000." If a woman has no signs or symptoms but has several close relatives with breast cancer, should she be tested? Because this inherited form of breast/ovarian cancer is relatively uncommon, and having a mutation in these genes can mean an 80 percent chance of contracting these cancers in one's lifetime, the benefit seems to outweigh the large cost.

Schwalb thinks that pre-symptomatic genetic testing for familial cardiomyopathies could also be a very beneficial undertaking. With a frequency as high as one in 500, there are potentially many people affected. And the benefits of knowing you are genetically susceptible are numerous. "If an individual tests positive, the rest of his family will probably want to know that they may be prone to a life-threatening disorder," he explains. "Siblings and children of affected individuals need this information. And if the family member finds out that he does not have the mutation, that's very valuable knowledge, too." The geneticist recommends concentrating on cardiovascular diseases, such as long QT syndrome, that can cause sudden death.

In the area of patient management, Schwalb says that knowing you are predisposed to a disease may make a huge difference. "Patients can change their behavior. If you know that you are at high risk for breast cancer, there are a wide variety of options to reduce your risk," he offers. "Or if you know that your child is at increased risk for Type 2 diabetes if he or she becomes obese, that might change your behavior as a parent."

Carrier testing—to establish if an individual or couple "carries" a gene for a particular disorder—is often done when planning a pregnancy. There are many issues surrounding how widely available to make certain diagnostic tests and these issues are being hotly debated right now. It's clear that if there is a strong family history of a disorder, carrier testing is probably in order. But when you are looking at an entire population, when do the benefits outweigh the costs?

Schwalb explains that most often carrier testing is directed at

particular groups where the risk for a disorder is high (such as sickle cell anemia for African Americans and Tay-Sachs disease in the Ashkenazi Jewish population), but other tests for fairly common diseases such as cystic fibrosis (CF) are more widely applicable. The American College of Obstetrics and Gynecology recommends the carrier testing for CF be offered to all Caucasians of reproductive age. Screening was suggested for Caucasians because at the time, three years ago, data only provided for effective testing in that group. "Now we have the same level of information for Hispanics and African Americans," he says.

"The exact circumstances that make a carrier test a worthwhile, cost-effective endeavor have not been defined. However, as technology improves, the cost of testing will become a small-



er part of the equation. For example, 15 years ago, it cost about \$100 to test for a single CF mutation. We can now test for 60 mutations for less than \$200," he continues.

Finally, we come to the new and little understood specialty of pharmacogenetics. Determining reactions to medications based on genetics is part and parcel of our growing understanding of the human genome, but the research, while it is very promising, is still in its infancy. Potentially, this new field could save a lot of lives and a lot of money, since many patients are given medicines that may be effective in most people, but don't work for them, or may actually be detrimental and even lethal. There are 100,000 deaths in the U.S. each year attributed to adverse reac-

tions to drugs. That's just one frightening statistic. There are more than two million reactions to drugs that while not deadly are serious enough to require hospitalization. And, of course, there are many situations where medicines just don't work at all.

During the next five to 10 years, the customization of drug treatments will be a big headliner in medicine. Because enzymes which are encoded for by the cytochrome P450 family of genes are critical in metabolizing more than 30 different classes of drugs in use today, the focus of much research is the DNA variations in these genes. Many researchers—in laboratories all over the world—are working on this right now, says Schwalb.

Because these genes are not involved in development or the normal functioning of the body, the effects of such variants are

Potentially, this new field could save a lot of lives and a lot of money, **since many patients are given medicines that may be effective in most people, but don't work for them,** or may actually be detrimental and even lethal. There are 100,000 deaths in the U.S. each year attributed to adverse reactions to drugs.

generally not noticed until a patient's reaction to a particular drug—at a normal dose—is unusual. These variants may affect the dosage at which a drug works, or whether the drug is safe and/or effective for that individual. If these enzymes are less active than normal, or totally inactive, and the drugs are not broken down and eliminated quickly enough from the body, the patient can experience an overdose.

“For example, antidepressants such as SSRIs are great for the majority of people, but don't work at all for others. The anticoagulant warfarin (Coumadin) is a lifesaver, but for others, it can actually be dangerous,” he says. “Some people with an identifiable change in the Cytochrome P450 gene are ‘poor metaboliz-

ers’ of warfarin. In these people, the regular dose of the drug acts like an overdose. That is the reason why all patients put on warfarin therapy are carefully monitored for dosage when they start therapy.” Of course, the down side of this new knowledge about individual response to medications is that if there are only one or two drugs on the market to treat a particular condition, and the patient cannot metabolize those drugs, he may be left with no treatment options.

Right now physicians basically prescribe medication and dosages on a trial and error basis, says Schwalb, and if a patient has a bad reaction or no reaction at all, the physician moves on to try another drug or a lower dose of the same drug. The goal of pharmacogenetics is for physicians to be able to order a personalized genetic profile for each patient that would ensure that the best drug is prescribed right from the start. And rather than determining dosages by weight and age, the physician could refer to the patient's genetic “blueprint,” which would provide the necessary information to determine his ability to metabolize the drug.

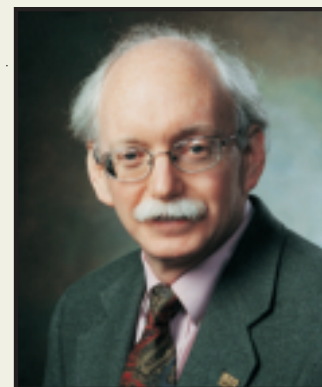


The future of genetics looks extraordinarily promising, according to the geneticist. But because new information becomes available on an almost daily basis, many physicians are overwhelmed, and don't know when a finding has true import for their practice of medicine. Schwalb has developed a Web site—which will have constantly updated information on genetics, as well as interpretations of the practical relevance of the findings—to remedy what is currently a bewildering situation. The site, which can be accessed at www.TheUniversityHospital.com/adultgenetics, will also list all tests currently available at the UMDNJ Center for Human and Molecular Genetics, which Schwalb directs, as well as “bulletins” as new tests become available.

As patients learn about findings in genetics from the media, “they will want to know: ‘Does this help me in any way?’” he says, “and as new diagnostic tests become available, patients will ask where and when they can get them.” He points out that if only pharmacogenetics had been a bit more advanced, Vioxx might not have been recalled. “Had we been able to identify those who would be adversely affected ahead of time with a simple test, the millions of people who took this drug and benefited from it would not have been forced to do without it and those adversely affected would never have been prescribed the drug in the first place.” This is the promise of a specialty that may very well change the face of “medicine” as we know it today. ●

John Katz, MD'75

A Message to Alumni



ONE OF THE MOST PLEASANT TASKS I have as President of the Alumni Association is to thank all the alumni who have generously supported NJMS students. Many alumni have ensured that their support will continue in perpetuity by establishing endowed scholarships with a donation of \$25,000 or more. I am happy to report that as I write this message, seventeen endowed scholarships have been created by alumni and friends of our school.

The Scholarship Committee meets with great pride and dedication to select each year's award recipients, focusing on academic performance, financial need and school and community involvement. This past summer, the committee awarded more than \$156,000 to 112 deserving students. They received their awards at the Scholarship Awards Dinner on October 19. ●

WITH GRATITUDE FOR THEIR GENEROUS SUPPORT, we are pleased to list those who have established New Jersey Medical School Endowed Scholarships:

Dr. and Mrs. Charles A. Accurso'84
Elizabeth Alger, MD'64
Peter Coccoziello
David Dines, MD'74
Joseph V. DiTrollo, MD'79
Gerard Hansen, MD'62
Dr. and Mrs. George F. Heinrich'72
Drs. George and Helene Hill
Dr. and Mrs. Marc Maiatico'76
Gerard Malanga, MD'87
Patrick McGovern, Jr., MD'78
Susan Hagen Morrison, MD'81
The New Jersey Medical School Alumni Association
Dr. and Mrs. Dennis O'Neill, '79
Richard W. Pozen, MD'70
Ida Ellen Schwab, MD'76
Alice E. Tassoni
Richard H. Wong, MD'79

News of special interest to NJMS graduates



SCHOLARSHIP AWARDS DINNER

1. Some of the Named Scholarship recipients.
2. Class Scholarship recipients.
3. Dr. Susan Hagen Morrison'81 awarded The Scholarship in Memory of Giacomo Adessa, MD'71, to Amy Palmieri'05. She established the award with her husband, Dr. Douglas Morrison, her family and friends.
4. Kapil Rajwani'05 receives a plaque from Dr. A. K. Bhattacharya'90 to commemorate his receiving the Scholarship in Honor of Professor A. K. Bhattacharya.
5. Dr. John W. Katz'75 congratulates Barbara Eckstein'05, recipient of the Dr. Rosemary Gellene'60 Memorial Scholarship, established by the Alumni Association–NJMS.
6. Charles Javier Jordan'06, recipient of the 2004 American Medical Association Foundation Minority Scholars Award, with AMA Minority Affairs Consortium Representative Albert Hsu and Pfizer Humanities Initiative Representatives Candace Howell (left) and Janice Williams (right).
7. Seated, left to right: Ursula Petillo, Marie DiTrolio, Joseph Petillo, and Dr. Joseph V. DiTrolio'79. Standing, left to right: Dr. Rene Chalom'89, Dr. Anthony Scillia'75, Pat Bower and Dr. John W. Katz'75.

Paul F. Vinger, MD'65

Andre Vanderzanden, MD'68, (center) with daughter Jacqueline (left) in Haiti.



THE 1960s

Daniel Cowell, MD'60, is professor in the Department of Psychiatry and Behavioral Medicine and Associate Dean for Graduate Medical Education at the Joan C. Edwards School of Medicine, Marshall University. He and his wife Diana, a hospice social worker, live in Huntington, WV. Their youngest son, Dana, a political science major at West Virginia University, will spend his third year at Grenoble University in France. Dan invites his friends to call; for his number, call the NJMS Alumni Association Office at 800-477-7040 or 973-972-6864.

Philip H. Lapidus, MD'61, welcomed his sixth grandchild, Rebecca Bellick, last November.

Guy T. Selander, MD'61, is still in family practice after 40 years.

Elizabeth A. Alger, MD'64, retired from NJMS on June 30, 2004. She is now senior associate dean for education at the new branch campus of Weill Cornell Medical College in Qatar.

Sandra L. Buchin, MD'64, retired in October 2004 from her position at the Social Security Disability Service.

William R. Host, MD'64, MBA, MPH, FACS, is president and CEO of the Wyoming Valley Healthcare System, Wilkes-Barre, PA.

Paul F. Vinger, MD'65, clinical professor of ophthalmology at Tufts New England Medical Center in Boston, MA, and an ophthalmologist with Lexington Eye Associates, received the 2004 William F. Hulse Memorial Award from the American Society for

Testing and Materials (ASTM) Committee FO8 on Sports Equipment and Facilities.

Ethel Patten, MD'67, grandmother of four, is enjoying retirement. Her hobbies include gardening, photography, cooking, reading, traveling, theater and movies. She and her husband Bernie just celebrated their 40th wedding anniversary in French Polynesia.

James R. Phelan, MD'68, CDR Mc USNR, is still on active duty in the Navy, but will retire in January 2005. He hopes to find another position as interesting and diverse as this one was.

Andre Vanderzanden, MD'68, volunteered with the Haitian Health Foundation with daughter Jacqueline, a third-year student at Albany Medical College (NY).

Robert Johnson, MD'69, was recently married to Sharon Smith, an OB/GYN manager at Covenant Hospital in West Texas, where he practices general and tumor surgery. He also practices at the Plainview Rural Health Clinic.

THE 1970s

Albert Ray, MD'70, medical director of Pain Medicine Solutions, Miami, FL, is the recipient of the American Academy of Pain Management Distinguished

Service Award'04 and the Southern Pain Society President's Award'04.

Donald E. Greydanus, MD'71, was inducted as an honorary fellow in the Indian Academy of Pediatrics (IAP) for his contributions to child and adolescent health care, including educational assistance to the IAP. He is pediatric program director at Michigan State University/Kalamazoo Center for Medical Studies, the co-editor of *Adolescent Medicine Clinics* and editor-in-chief of the American Academy of Pediatrics book *Caring for Your Teenager*.

Richard Huss, MD'71, moved from New Jersey to Maryland, where he will practice allergy and clinical immunology.

Lawrence J. Pizzo, MD'71, received an MA in religion studies from Felician College. He recently became a grandfather to Logan John Pizzo.

Thomas Dayspring, MD'72, a clinical assistant professor of medicine at NJMS, has been elected a Fellow of the American College of Physicians (FACP).

Julian E. DeLia, MD'72, was recently named by his peers as one of the fathers of maternal-fetal surgery for his work with intrauterine placental laser surgery and twin-twin transfusion syndrome.

IN MEMORIAM

The Alumni Association extends deepest sympathy to the families and friends of all our alumni who have passed away.

Antonio P. Battaglia, MD'60, passed away on January 26, 2004.

Jeremias T. Dubyk, MD'74, passed away on June 17 in Bermuda. He was an OB/GYN and partner in the practice of Dubyk, Pinto and Perez, the OB/GYN director at St. James Hospital in Newark and a member of the staff at St. Barnabas Medical Center in Livingston, NJ.

Walter Florczak, MD'67, passed away on December 19, 2003.

Robert E. Moylan, MD'67, a urologist and resident of Weston, MA, passed away on August 11, 2004. He was a clinical instructor of surgery at Harvard Medical School and a staff member of Mount Auburn Hospital, Melrose-Wakefield Hospital, Waltham Hospital and the Cambridge Health Alliance. He was also a member of the American Urological Association and the Boston Surgical Society.

John A. Muccino, MD'60, passed away on February 20, 2004. A resident of Los Alamitos, CA, Dr. Muccino practiced OB/GYN until his retirement.

Lawrence M. Scheininger, MD'60, of Venice, FL, passed away on May 16, 2004. An obstetrician and gynecologist, he was a clinical assistant professor of OB/GYN at NJMS for 25 years.

Donald L. Epstein, MD'72, is medical director of the ICU at the Cleveland Clinic and chairman of its pulmonary and respiratory care service. He is also medical director of Huron Hospital in East Cleveland, OH.

Beryl McCormick, MD'73, was inducted as a Fellow in the American College of Radiology. She is affiliated with Memorial Sloan Kettering Cancer Center in New York.

David Dines, MD'74, was named president of the American Shoulder and Elbow Society for 2004–2005.

F. Ronald Feinstein, MD'74, was appointed for a sixth term as Regional Chief of Plastic Surgery for Southern California in the Kaiser Permanente organization.

Kenneth P. Rubin, MD'75, is chief of gastroenterology at Englewood Hospital and Medical Center and serves as medical advisor and trustee for the New Jersey Crohn's and Colitis Foundation.

Michael Skehan, MD'75, was appointed president and chairman

of the board of Arnett Health System, which includes Arnett Clinic, the largest physician-owned multispecialty group in Indiana, and Arnett Health Plans.

Joel S. Policzer, MD'76, senior medical director of the Broward County, FL division of Vitas Hospice Care, was inducted into the Fellowship of the American Academy of Hospice and Palliative Medicine in February 2004, one of 25 Fellows in the U.S. Co-editor of *Twenty Common Problems in End-of-Life Care*, published by McGraw-Hill, he is on the clinical faculties of both the University of Miami School of Medicine and the Nova-Southeastern University College of Osteopathic Medicine.

Jonathan Steinhart, MD'76, and wife Ashley announce the birth of their twin sons, Jordan Christopher and Andrew James on July 16, 2004. The couple also recorded and produced their first CD, "American Voices," a collection of traditional folk and early American hymns. Dr. Steinhart's email address is: steinhart@frontiernet.net.

Stay in Touch!

We'd like to hear from you. Mail this form to: Alumni Association of New Jersey Medical School, 185 S. Orange Avenue, P.O. Box 1709, MSB-B504, Newark, NJ 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)			

Please be sure to let us know if you would like to be a representative for your class.

Please join the Alumni Association of New Jersey Medical School.

General Dues	\$50.00
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 now being offered to our alumni as a means to perpetuate the goals of the Alumni Association and enable its members to sustain their support in a more meaningful way. All categories of membership will afford you the opportunity to keep connected with us. You will continue to receive all membership benefits, including *NJMS Pulse* magazine, information about upcoming events and reunions, and library privileges.

Randall Case, MD'77, became vice president of global services at Siemens Medical Systems in October 2003. In November 2004 he was recertified as a diplomate of the American Board of Emergency Medicine. For the past two years Dr. Case has served as chair of the Emergency Medicine Practice Committee for the American College of Emergency Physicians.

Carla Martin, MD'77, was named to the active staff in the department of medicine at Memorial Hospital of Rhode Island.

Donald C. Arthur, MD'78, is the 35th Surgeon General of the United States Navy and Chief of the Navy's Bureau of Medicine and Surgery. (See article on page 18.)

Paul LoVerme, MD'78, has been elected president of the NJ Chapter of the American College of Surgeons.

THE 1980s

Frank Kane, MD'82, has been elected treasurer of the American Board of Family Practice.

Michael Kane, MD'83, is medical director, Mountainside Hospital Cancer Center (NJ).

Fidel Arbolaez, Jr., MD'84, a family practitioner with experience in urgent care, disease management and geriatrics, is practicing at Family Physicians of Winter Haven, FL, which opened last summer.



Jonathan Steinhart, MD'76, and twin sons, Jordan Christopher and Andrew James

SAVE *the* DATE

CAREER NIGHT

WEDNESDAY, FEBRUARY 23, 2005

Doctors in all specialties, please volunteer to share your experiences and insight with NJMS students. Informal, round-table discussions

Dinner 5:30 p.m.

Program 6:00 – 8:00 p.m.

Call the Alumni Office for information: 973-972-6864 or e-mail minkda@umdnj.edu

A GREAT TIME WAS HAD BY ALL AT

Reunion 2004



TOP: Class of 1984 reunion celebrants; standing, l. to r.: Drs. Joseph Benevenia, Katherine Benevenia, Yolanda Cillo, Charles Rilli. Seated, l. to r.: Drs. Charles Accurso, Matthew Lubin, and Allan Tunkel.

ALUMNI REUNION 2005

Saturday, April 16, 2005
The Parsippany Sheraton Tara
Parsippany, NJ

HONORING THE CLASSES OF
1960 • 1965 • 1970 • 1975 • 1980 • 1985 • 1990 • 1995 • 2000 • 2005

Alumni, students and faculty will join together at the Golden Apple Awards Dinner Dance, followed by a special awards and dessert reception for alumni.

John J. Culliney, MD'84, is the chairman of radiology at Wilcox Memorial Hospital and serves on the Board of Directors at Kauai Medical Clinic, both in Lihue, Kauai, HI.

Allan R. Tunkel, MD'84, has been appointed Senior Associate Dean of Academic Campuses at Drexel University College of Medicine, Philadelphia, PA.

Eric L. Sichel, MD'85, is a director of Elite Pharmaceuticals, Northvale, NJ, and president of Sichel Medical Ventures, Inc., providing biotechnology company assessments and investment banking services.

Rene Chalom, MD'89, is the director of the pediatric intensive care unit at the Valley Hospital, Ridgewood, NJ.

Jay Redan, MD'86, is the director of minimally invasive general surgery at Florida Hospital, Celebration Health, Orlando, FL.

Philip Chaikin, PharmD, MD'87, is executive vice president and head of international drug development for Kyowa Pharmaceuticals.

THE 1990s

Ashish K. Bhattacharya, MD'90, shares a photo of his family. Back row, left to right: Frances and Ashish Bhattacharya. Front row, left to right: sons Aidan, Deven and Kirin. He practices plastic surgery in Freehold, NJ.

Minda Gold, MD'91, opened a family practice office with two colleagues. Their practice includes obstetrics, and they are working to develop an on-site complementary

practice, including Pilates, yoga, counseling, massage and a wellness center.

Kevin G. Shortt, MD'91, has joined the staff at the Bassett Heart Care Institute, Cooperstown, NY. He is certified by the American Board of Surgery and the American Board of Thoracic Surgery.

Jeffrey Upperman, MD'91, recently returned from a stint in Iraq as an Army Reserve surgeon. (See article on page 27.)

Gina Campagna, MD'92, who did her residency and fellowship in mammography and pulmonary medicine at New York University, recently joined Permian Basin Radiology in West Texas.

Sara Karimi, MD'93, is a full-time radiologist at Bronx Lebanon Hospital, NY.

Gilda Cipriano, MD'94, was married to Daniel L. Fackrell on August 21, 2004.

Labrini C. (Dalamangas) Liakonis, MD'94, and husband, Chris, announce the birth of their twin daughters, Niki and Amalia.



Ashish Bhattacharya, MD'90, and family

Catherine Ruebenacker Mazzola, MD'95, and her husband Steven announce the birth of their son, Joseph, who joins brothers Michael and Paul. Dr. Mazzola is a pediatric neurosurgeon at Hackensack University Medical Center in New Jersey.

Rohit R. Keswani, MD'96, has opened North Atlantic Pain and Rehabilitation Associates in Verona, NJ, with **Richard Bach, MD'96**.

Debbie Salas-Lopez, MD'96, assistant professor of medicine and chief of the Division of Academic Medicine, Geriatrics and Community Programs at NJMS, created a program called "House Calls for Seniors," offering home visits to elderly patients in Newark.

Ricardo Vargas, MD'96, who is serving his second year as chief of the medical staff at Montgomery Memorial Hospital, NC, also serves on the First Health Board of Community Health.

Sharon Fleischer Alfinito, MD'97, husband Peter, and their children live in Chester Springs, PA. Dr. Alfinito practices family medicine, while her husband is with Wyeth Pharmaceuticals.

Thomas Agesen, MD'97, is married to **Michelle Antonowicz, MD'96**. They have two sons, Christopher and Matthew.

John E. Cosmi, MD'97, and wife Tania welcomed their first child, a son, Peter John, in September 2004.

Patrick Hinfey, MD'97, and wife **Yvonne Hung, MD'98**, welcomed their second child, Andrew Ryan, on November 2, 2004.

Daniel Licht, MD'97, is assistant professor of neurology and pedi-

atrics at the University of Pennsylvania and Children's Hospital of Philadelphia.

Carla Martin, MD'97, has been named to the active staff of the Department of Medicine at Memorial Hospital of Rhode Island.

Michael Curi, MD'98, will finish his general surgery residency at the University of Chicago in June 2005 and will do a one-year fellowship in vascular surgery at Washington University in St. Louis, MO. He and his wife, Lisa Moore, honeymooned in Italy after their marriage in September.

Uri Lopatin, MD'98, was a Clinical Research Training Program (CRTP) fellow and one of only nine students invited to spend a year at NIH in its inaugural class of 1997. He has now completed his residency training and returned to NIH for an infectious diseases fellowship. He plans a future in academic medicine and translational research.

THE 2000S

David J. Cennimo, MD'01, is Medicine Chief Resident at NJMS (2004–2005).

Ellen M. Didimamoff, MD'01, has joined the staff at Hickory Run Family Practice Associates in Califon, NJ. She recently completed a three-year residency in family practice at Hunterdon Medical Center.

Meredith L. Hutcheson, MD'01, has been appointed to Warren Hospital's (NJ) medical staff, where she has active staff privileges in family practice. Dr. Hutcheson completed a residency at Bryn Mawr Family Practice Residency Program in PA. ●

NJMS Students Learn Abroad



SUMMER EXTERNSHIP IN ENGLAND

For the past five years the Alumni Association has sponsored externships in England for first-year medical students. The program was developed in conjunction with St. George's University School of Medicine, Grenada, West Indies, by Joseph V. DiTrollo, Jr., MD'79, and Orazio L. Giliberti, MD, associate dean for clinical affairs at St. George's University. The NJMS students who participated this past summer are, left to right: Michelle Kim, Dr. Michael Webley, Director of Medical Education at Stokes Mandeville Hospital in England, Michael McGuire and Danielle Bertoni.

NJMS STUDENT'S UROLOGICAL ROTATION IN GERMANY

Fourth-year medical student Joseph Ciccone spent a month last summer in the urology department at Diakoniekrankehaus in Bremen, Germany. He was present for the first-ever brachytherapy for prostate cancer and also had an opportunity to see Synergo, a newer treatment modality for bladder cancer. Pictured are Ciccone (second from left) and his wife, Kerriane, with their hosts, Dr. Rolf Muschter and office manager Elke Bruns. ●



Robert L. Johnson, MD

Professor and Chair, Department of Pediatrics
New Jersey Medical School, NJMS'72



1. At what point in your life did you decide you wanted to become a physician, and why?

When I was 9 years old my Sunday school teacher asked me what I wanted to be when I grew up. I immediately said I wanted to be a missionary doctor like my hero Albert Schweitzer. I don't recall how I knew who he was or even why I said it. That desire stuck for many years. Eventually the idea of doing medical missionary work abroad faded, and was replaced by a desire to work domestically with the underserved. The work has proven to be extremely rewarding.

2. Who were your mentors when you were an NJMS student?

Franklin Behrle, Mary Mycek, Mike Lyons, Carroll Leevy, Anthony Boccabella, Connie Uy, and Ted Kushnick.

3. What is your fondest memory of being a student at New Jersey Medical School?

My class was the last to have basic science classes in Jersey City. The student lecture hall was on one of the upper floors of the medical science building and had a fantastic view of New York City harbor. Many times, as my mind wandered during some of the less inspiring lectures, my eyes would stray to that magnificent view. The most vivid memory I have is a biochemistry lecture given by Dr. Robert Wilson on the day the QEII sailed into New York Harbor during its inaugural voyage.

However, my fondest memory is the close bond that formed between students and faculty as we moved to Newark

and worked to make a difference in the community with programs such as the Student Family Health Care Center.

4. Can you tell us about your latest book project?

My current book, *Strength for Their Journey*, is a parenting guide for African American parents. It is based largely on the 30 years of experience my co-author, Dr. Paulette Stanford, and I have had in our work counseling parents from the greater Newark area.

5. What do you consider the top three accomplishments of your career?

- Founding and growing the Division of Adolescent and Young Adult Medicine. When I joined the faculty in 1976, pediatrics stopped at 12 years of age.
- Becoming president of the New Jersey State Board of Medical Examiners.
- Becoming professor and chair of the Department of Pediatrics.

6. As chair of pediatrics, what are your goals for your department?

- Expand the size of the faculty in each of the pediatric divisions.
- Expand the departmental research base.
- Evolve the NJMS Department of Pediatrics into one of the nation's premier children's health enterprises. ●

Keep in Touch

Our faculty welcome your comments, suggestions and questions. We have provided email addresses for individuals featured in this issue and have included patient referral contact information at the end of the articles where appropriate. We look forward to hearing from you.

Anthony V. Boccabella	boccabel@umdnj.edu	Robert L. Johnson	rjohnson@umdnj.edu
Henry Bennett	bennethl@umdnj.edu	Andrew Kaufman	kaufmaga@umdnj.edu
Charles Cartwright	cartwrch@umdnj.edu	Marc Klapholz	klapholz@umdnj.edu
Solomon F. Caudle	caudle@umdnj.edu	Kenneth M. Klein	kklein@umdnj.edu
Joel A. DeLisa	delisaja@umdnj.edu	Hong Li	liho2@umdnj.edu
Barbara H. Fadem-Chenal	fadem@umdnj.edu	Harvey L. Ozer	ozerhl@umdnj.edu
Lawrence E. Harrison	l.harrison@umdnj.edu	Anuradha Patel	patelan@umdnj.edu
Robert F. Heary	heary@umdnj.edu	Marvin N. Schwalb	schwalma@umdnj.edu
Debra S. Heller	hellerds@umdnj.edu	Ian Whitehead	whiteip@umdnj.edu
Bart Holland	holland@umdnj.edu	Lionel S. Zuckier	zuckier@umdnj.edu

Patient Referrals

The Spine Center at the Neurological Institute of New Jersey ProCord Clinical Trial: 973-641-0600

Comprehensive Pain Management Center at UH: 973-972-2085

NJMS Molecular Genetics Center: 973-972-3300

Cardiology Services at UH: 973-972-2574

Division of Medical Retina at The Institute of Ophthalmology and Visual Science: 973-972-2065

University of Medicine and Dentistry of New Jersey
 New Jersey Medical School
 185 South Orange Avenue
 P.O. Box 1709
 Newark, New Jersey 07101-1709

<http://njms.umdnj.edu>

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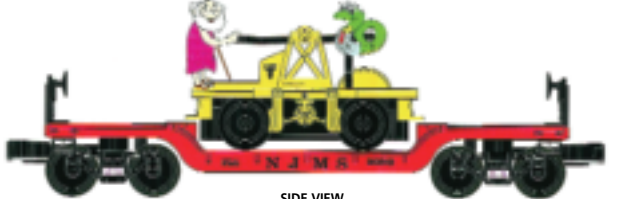


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