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New York Medical College

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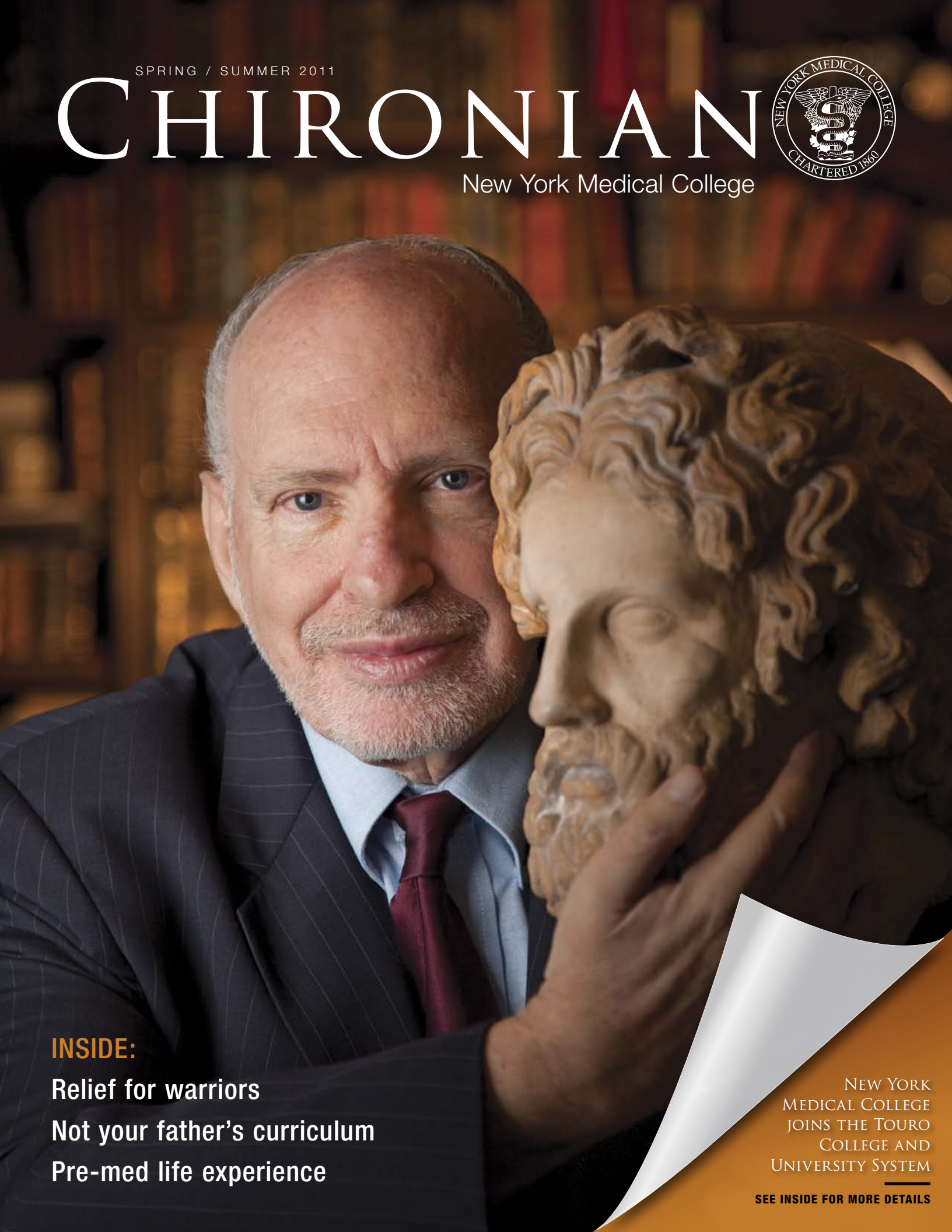

INSIDE:

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Not your father's curriculum

Pre-med life experience

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LEADING EDGE

Highlights of Current Research

STUDY SHOWS AN INCREASE IN BABESIOSIS IN LOWER HUDSON VALLEY Lyme disease may continue to reign as the most prevalent tickborne disease in the Hudson Valley, but now there is a growing concern over a dramatic increase in babesiosis, a tick-borne infection of erythrocytes. A study led by **Julie T. Joseph, M.D.,** assistant professor of medicine, reveals that the number of Lower Hudson Valley residents diagnosed with babesiosis has increased 20-fold, from 6 to 119 cases per year from 2001 to 2008, compared with an approximate 1.6-fold increase for the rest of New York, a striking increase since babesiosis first emerged in the Hudson Valley in 2001. The authors warn that babesiosis has the potential to cause serious illness and death, especially in highly immune-compromised patients, and urge clinicians to consider babesiosis in persons with fever and hemolytic anemia who have been exposed to ticks or received blood products. "Babesiosis in Lower Hudson Valley New York, U.S.A.," *Emerging Infectious Diseases,* May 2011 (Vol. 17, No. 5). Online at http://www.cdc.gov/eid/content/17/5/843.htm.

RESEARCH LINKS LONGER LIFE SPAN WITH IMPROVEMENTS TO SOCIAL SECURITY College researchers have made the surprising discovery that when Social Security benefits are improved, people over the age of 65 benefit most, and may even live longer. According to the study's lead author, **Peter S. Arno, Ph.D.,** professor of health policy and management, Americans over the age of 65 experienced steep declines in the rate of mortality in periods following the introduction of Social Security and subsequent improvements to the system. The authors found that Social Security keeps nearly 44 percent of older Americans out of poverty, helps improve seniors' living conditions and increases their access to medical care, all of which have resulted in longer, healthier lives. After controlling for changes in the economy and access to medical care, the study reported that, after Social Security was implemented in 1940, death rates among persons 65 and older fell more than those of younger age groups. That pattern was also seen in the mid-1960s and early 1970s after Social Security benefits were markedly improved through legislation and the indexing of benefits to inflation. "Social Security and Mortality: The Role of Income Support Policies and Population Health in the United States," *Journal of Public Health Policy,* May 2011 (Vol. 32, Issue 2). Online at http://www.ncbi.nlm.nih.gov/pubmed/21326333

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ALUMNI NEWS

ON THE COVER
William H. Frishman, M.D., the Barbara and William Rosenthal Chair of the Department of Medicine, is also a consummate physician, academic and all-around mensch. It is only fitting that he would be photographed embracing a bust of Asclepius—the god of healing, medicine and doctors—that resides in his office.

U.S. ARMY ENGAGES IN BATTLE AGAINST POST TRAUMATIC STRESS DISORDER

Esther L. Sabban, Ph.D., lands a competitive military grant to limit and prevent the effects of PTSD using an unusual pathway.

By Marjorie Roberts

Stress is a universal predator. In every society, in any language and at any age, members of the human race cannot escape the pressure that comes with the territory of daily life—rich or poor, in sickness and in health—until death intervenes. But what is one person's trauma can become another's fascination. Why are some individuals resilient while others succumb? What are the molecular components that distinguish between successful and unsuccessful adaptation to stress? These questions are the province of Esther L. Sabban, Ph.D., who is a recognized expert in exploring the biochemical angle of life's stressors. She has lately narrowed her focus to what many of her colleagues consider the most oppressive variant of all: Post Traumatic Stress Disorder (PTSD).

What used to be the final word in separating from active duty is becoming an ordeal without end for a majority of service members returning from Iraq and Afghanistan. For years, clinicians at veterans' hospitals and medical centers have been seeing soldiers burdened by traumatic experiences and alarmingly high rates of depression and alcohol abuse. While basic science researchers like Dr. Sabban look for ways to prevent the onset of symptoms or keep them from getting worse, the U.S. Department of Veterans Affairs, through its National Center for PTSD, has been providing a growing number and variety of programs and tools for early intervention—even offering a free smart phone app, called PTSD Coach. It says something about the prevalence of the disorder, not to mention the sufferers' ongoing need for relief.

A 2010 study in the journal *Military Medicine* examined rates of PTSD and the success of the VA programs among 120 service members. The findings for mental health problems were considered "quite alarming"—6 percent had PTSD, 27 percent showed dangerous alcohol use and another 6 percent carried the double burden of PTSD and alcohol abuse. A surprising 62 percent reported receiving some kind of mental health care since returning home from Iraq or Afghanistan.

The U.S. Army believes stress-related complaints have become so serious a problem for military personnel that Congress has mandated and the Department of Defense has established a number of funding opportunities for basic and clinical research awards to reduce the number of cases, better treat the disease and enhance psychological resilience to stress. The investment in Sabban's research was based on her innovative project to make a significant improvement in the quality of life for service personnel. In a global competition, she successfully competed against hundreds of applicants, and her proposal was funded to the tune of $1,538,196 over a three-year period.

It wasn't until 1980 that PTSD was added by the American Psychiatric Association to the third edition of its bible, *Diagnostic and Statistical Manual of Mental Disorders,* commonly referred to as DSM-III. Although a controversial diagnosis

when it was first introduced, the disorder has filled an important gap in psychiatric theory and practice. From a historic perspective, the significant change was the stipulation that the etiological agent came from outside the person rather than an inherent individual weakness. There could be no diagnosis of PTSD unless the patient had been exposed to a traumatic event—one that involved actual or threatened death or injury, or a threat to the physical integrity of the victim that caused intense fear, helplessness or horror.

One can only imagine how Dr. Sabban, who always has a smile on her face, would choose such a dismal subject to research. "The need is there," she says. "Approximately 6.8 percent of the U.S. population has PTSD at some point in their lives. It is a serious psychiatric illness with symptoms comprising excessive fear and startle, recurring nightmares, and problems with social interactions. People with PTSD are six times as likely as demographically matched controls to attempt suicide. It is a long and devastating disorder and there is a vital need for improved medications to treat it."

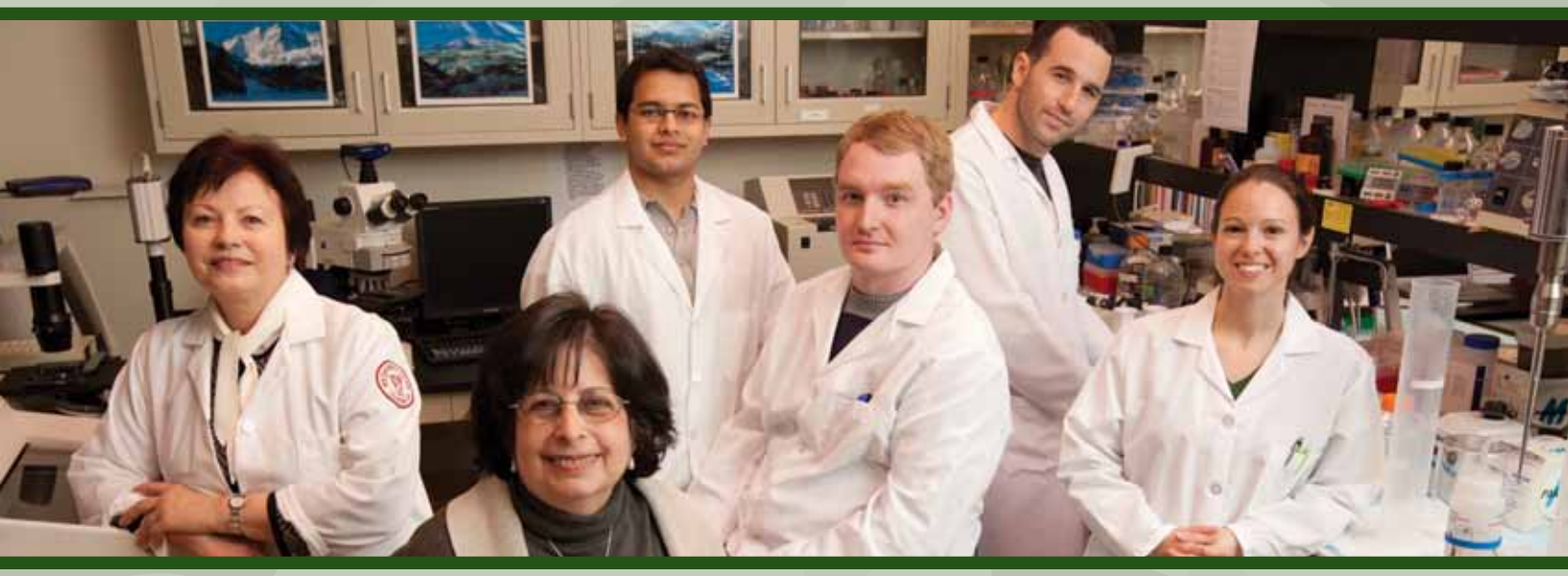
Perhaps her attraction was stimulated by the six years she spent in Israel, where the stress of possible annihilation overhangs every day. Dr. Sabban earned her B.Sc. and M.Sc. degrees from Hebrew University in Jerusalem, returning home for doctoral studies in biochemistry at New York University Medical Center. She remained at NYU for a post-doc as an assistant research scientist in the department of cell biology. By the time she left NYU three years later, she had become a research assistant professor in the departments of cell biology and psychiatry.

A key component of Dr. Sabban's research requires the use of an elevated plus maze, a tool to measure anxiety in rodents. The red lights help ensure a stress-neutral environment.

EARLY HONORS

Dr. Sabban joined New York Medical College as an assistant professor in 1983 and was the first female faculty member in the Department of Biochemistry and Molecular Biology. In 1986 she was promoted to associate professor and was made a full professor in 1991. Her support at the College has come mainly from the National Institutes of Health. This PTSD grant is her first from the Army, though she previously received a grant from the Office of Naval Research to study the molecular mechanisms of other types of stress.

Since coming to the College, Sabban has been active in medical and graduate education, and has trained many post-doctoral fellows, and masters and Ph.D. students. Ten graduates have carried out their Ph.D. thesis research in her laboratory. She is especially proud at having been named recipient of the 2000 Dean's Research Award. The honor recognized her national and international leadership of investigational efforts into the biology of the stress response and her outstanding contributions toward understanding the mechanisms that regulate catecholamine biosynthetic enzymes. She has published more than 140 peer-reviewed articles, and participated in many review committees, including NIH study sections and symposia organizing committees. She has lectured widely on her research in the U.S. and abroad and gave the introductory lecture at the International Symposium of Catecholamines and Other Neurotransmitters in Stress. She is a recent past president of the Catecholamine Society.



Esther L. Sabban, Ph.D., foreground, leads her team with intelligence—and humor, judging from the smiles. From left are Lidia Serova, Ph.D., Dr.Sc., Saurabh Malpani M.S., Andrej Tillinger, Ph.D., Lishay Alaluf, and Regina Nostramo, M.S.

Sabban has assembled a strong team that includes Lidia Serova, Ph.D, Dr.Sc, a research assistant professor and longtime collaborator from the Soviet Union whom Dr. Sabban invited to the College as a visiting scientist in 1995; Andrej Tillinger, Ph.D., a post-doctoral fellow with much experience in the biochemistry of stress mechanisms, having trained with Sabban's longtime collaborator and prominent stress investigator, Richard Kvetnansky, Ph.D, Dr.Sc; two Ph.D. students, Lishay Alaluf and Regina Nostramo, M.S., and Saurabh Malpani, M.S. Maria Gulinello, Ph.D., from the Albert Einstein College of Medicine, will participate as a consultant for the behavioral aspects of the study.

TAKING AIM

Based upon an improved understanding of the underlying changes in brain chemistry with PTSD, the researchers selected two compounds for nasal delivery—Y (NPY) and AGRP (83-132), both alone and combined—for their ability to reduce the PTSD reaction and diminish the manifestations of the disorder. NPY and AGRP are naturally occurring compounds, and increases in their levels in the brain have already been linked with resistance to developing PTSD and lowering stress-triggered anxiety. AGRP is known to inhibit some of the actions of naturally occurring hormones involved with stress. Previous studies by the team suggest AGRP (83-132) might be effective in treating stress-triggered disorders.

The researchers are using an animal model of PTSD called Single Prolonged Stress (a one-time exposure to several prolonged stressors). The study will examine dose and timing of intranasal delivery of their agents, before and after the stress, which the investigators predict will have a greater effect when the two compounds are combined. The benefits of this unusual method of drug delivery are clear to her. "I am pleased the drugs are to be administered in a non-invasive manner," Sabban says. "There is evidence that they can reach the brain faster and selectively because they do not have to pass through the blood-brain barrier."

She continues, "The strength of this work is that we are combining investigation of the modulation of PTSD symptoms in terms of behavioral features such as anxiety, startle and adverse social interactions, which are new aspects for us, with molecular and endocrine features of stress, which we have much experience with, especially the noradrenergic neurons of the brain.

"I've been thinking a long time about how to modulate stress. I'm hopeful that we will find out if one or a combination of the peptides will prevent the development of PTSD symptoms, and that the results will provide new insight into the mechanism of neurochemical changes associated with PTSD." ■

NEW INVESTIGATORS AUGMENT THE RANKS OF BASIC SCIENTISTS

Tularemia and seizures—the former still uncommon but a potential bioterrorist threat, the latter all too common and devastating—are the investigative focus of three new members of the College faculty.

By Cynthia A. Read

New York Medical College began the year enriched by the addition of three new researchers with international backgrounds and reputations. Appointed in December, they have joined the faculty of two departments in the basic sciences. Libor Velisek, M.D., Ph.D., and Jana Veliskova, M.D., Ph.D., now settled in their respective labs in the Department of Cell Biology and Anatomy, are investigating seizures from intriguingly different points of view. In the Department of Microbiology and Immunology, Chandra Shekhar Bakshi, D.V.M., Ph.D., has trained his sights on tularemia. While the three are studying different diseases with diverse methods, together they bring fresh ideas and spark new collaborations among their colleagues as they bring their expertise into the mix.

SEEKING THE WHY OF SEIZURES

Libor Velisek and Jana Veliskova (then Ortova) met in the early 1980s when they were fellow medical students in Czechoslovakia. She had initially planned to follow in the long line of physicians in her family, but he sparked her interest in basic science. The two eventually shifted their focus to neurophysiology and epilepsy, the specialty of his preceptor. Because of the strained political climate of that place and time, more research than clinical opportunities were available in Prague, where the pair, who were now married, wished to remain with their young daughter. By the late 1980s, they had already amassed an impressive collection of publications on seizures, and in 1991 they came to the United States and worked at the Albert Einstein College of Medicine in post-doc positions focusing on developmental epilepsy.

There the two developed their individual research expertise while continuing to be prime collaborators, eventually obtaining faculty positions in Einstein's neurology and neuroscience departments. The Veliseks were drawn to New York Medical College because of its collegial atmosphere, as well as an opportunity to expand their laboratory. They brought with them more than $2 million in grant support, and by early spring had assembled a team and begun some experiments.

Libor Velisek's particular specialty is infantile spasms (West syndrome), a catastrophic form of epilepsy that commonly begins when an infant is four to six months old. The syndrome is the result of a compromised brain, but the causes are variable and often undetermined. Characterized by clusters of flexion spasms, a chaotic EEG between seizures, and usually mental retardation, the prognosis is poor.

Velisek describes infantile spasms as "unique, complicated and puzzling." No other seizures respond to

Jana Veliskova, M.D., Ph.D.

treatment with ACTH (adrenocorticotropic hormone) and until he developed a valid rat model, there were no good animal models for study. To identify what causes the brain to seize, and why these seizures do respond to ACTH, he is studying the effects of prenatal exposure to corticosteroids, which are often prescribed for pregnant women at risk for premature delivery. This research is supported by a three-year NIH grant "Novel mechanism-based treatments for infantile spasms," on which he is the principal investigator, as well as a grant from the March of Dimes.

Jana Veliskova is using rat models to study how sex hormones influence seizures and neuronal excitability. It was long believed that estrogens increase susceptibility to seizures, so women with epilepsy were advised not to use hormone replacement therapy. But Veliskova has discovered that low-dose estrogen is actually neuroprotective and has anticonvulsant effects. Besides investigating the underlying mechanisms, she is also studying how estrogen affects the normal brain, especially learning and memory. This research is supported by a four-year NIH grant. "Neuroprotective strategies in seizure-induced damage."

Drs. Velisek and Veliskova are co-investigators on each other's NIH grants. In addition, he is the principal investigator and she a co-investigator on a subcontract for another NIH grant, "Mechanisms of genetic susceptibility in juvenile myoclonic epilepsy." This form of epilepsy is inherited, but the exact mode is not clear, and they are using a mouse model to build on research by Columbia University geneticist David Greenberg, Ph.D.

Libor Velisek, M.D., Ph.D.

Joseph D. Etlinger, Ph.D., professor and chairman of the Department of Cell Biology and Anatomy, commented, "recruiting Libor and Jana was a great opportunity to build on our departmental strength in the area of neural plasticity. Libor's infantile spasm model and Jana's project on estrogen-dependent seizures both involve neurodegeneration and cognitive decline, which should lead to exciting collaborations with our faculty studying learning and memory, as well as neuronal loss. They also bring expertise that will help other investigators at the College in monitoring regional brain activity and behavior in animals."

TULAREMIA, A BIOTERRORISM THREAT

Tularemia, also known as rabbit fever, is a rare but often fatal illness caused by the bacterium *Francisella tularensis.* So infectious that inhaling as few as 10 bacteria can cause disease, *F. tularensis* is considered a dangerous biothreat agent—in fact, it has been weaponized by the United States, Japan and the former Soviet Union. Dr. Shekhar Bakshi is studying the genetics of *F. tularensis,* the pathogenic mechanisms that cause it to be so virulent, and its interaction with the host's immune system, all with the eventual goal of developing a safe and effective vaccine.

Bakshi claims an early and abiding interest in basic science, particularly the molecular basis of bacterial infections. His initial focus was salmonella, but after the attacks of 9/11 and the anthrax scare that followed, the NIH began allocating additional funds to bioterrorism research. In 2003 Bakshi joined the Center for Immunology and Microbial Disease at Albany Medical College, which had received a grant to study tularemia.

In 2010, Ira Schwartz, Ph.D., chairman of the Department of Microbiology and Immunology, sought to expand his department's scope and expertise by hiring an additional scientist whose research related broadly to the area of microbial pathogenesis and complemented other research activities in the department. Bakshi was eager to accept this new position because of the department's strong focus on bacterial diseases. It offered a good balance of research and teaching, and it would give him the opportunity to work with a biosafety level-3 laboratory (BSL-3) with the federally mandated biocontainment precautions required for

Chandra Shekhar Bakshi, D.V.M., Ph.D.

research with potentially lethal agents such as *F. tularensis.* (The College's BSL-3 lab, which has been undergoing upgrades, is scheduled to reopen in June.) Bakshi's research is supported by a three-year grant from the NIH, for "Immunology and pathogenesis of pulmonary tularemia," as well as a one-year NIH bridge grant for "modulation of macrophage function by *F. tularensis.*"

When people are initially infected with the microbe, they typically display no signs of sickness or immune response. "We now know the bacteria cause active immune suppression, which is regulated by genes that alter the function of the immune cells," says Bakshi, who has been using both mouse model and in vitro studies to better understand the bacteria's antioxidant defenses and virulence. The knockout mutant of *Francisella,* which reduces the virulence of the bacteria, could become the basis for a vaccine to be developed in much the same way that vaccines for typhoid and tuberculosis were cultivated. The mutant might also help scientists figure out how to enhance the host's immune response or suppress the activity of the infectious form of the bacteria.

"Shekhar Bakshi's research complements that of researchers in the department who are studying how hosts mount an innate immune defense to other pathogens and so offers a great opportunity for synergy," says Dr. Schwartz of his department's newest member.

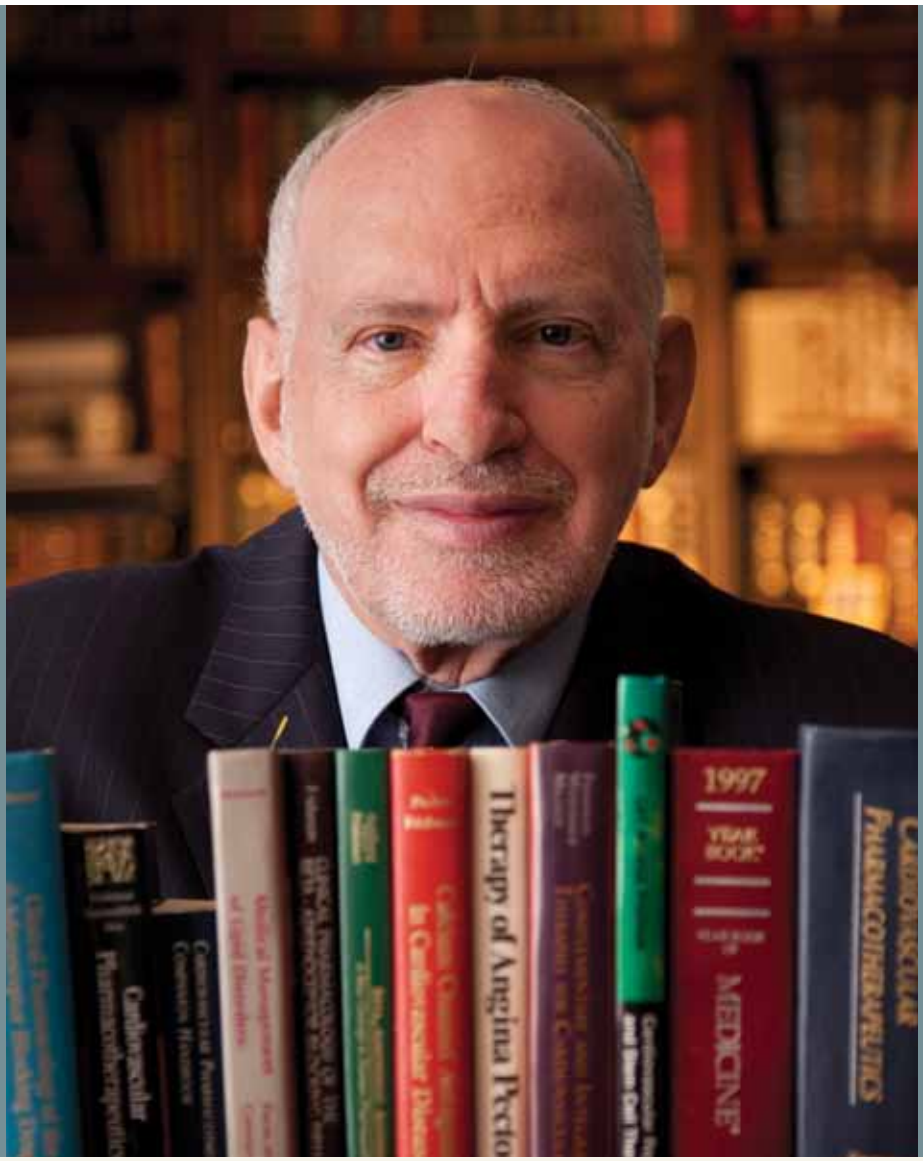
For his part, Dr. Bakshi says he is looking forward to developing new collaborations, and hopes that his work on *F. tularensis* can provide the basis for establishing a strong biodefense program at the College, a vision in which Schwartz has confidence. "Shekhar has energetically integrated himself into our department, and I expect that he will quickly establish a successful, well-funded research program, even within the current tight funding climate," says Dr. Schwartz.

THE LAST WORD

Francis L. Belloni, Ph.D., dean of the Graduate School of Basic Medical Sciences, offered a decidedly enthusiastic take on the trio's arrival at the College. "We are thrilled to have these three new researchers join our faculty," he effuses. "Neuroscience and infectious diseases are not only two of the College's areas of research excellence, but they are also of great interest to prospective graduate students. I have no doubt that they will help us in our continuing quest to attract outstanding young students into our Ph.D. and master's programs. In fact, shortly after their arrival last December, even as they were still unpacking, all three of them willingly pitched in to help interview Ph.D. candidates during the admission period that was underway, helping us select another strong class for next fall. I look forward to working with them in the years to come." ■

Dr. Frishman keeps

William H. Frishman, M.D., is many things: admired teacher, academic leader, renowned researcher and history buff who still finds time to practice cardiology, write books and cheer the Yankees. It's a balancing act, and he thrives on it.



From childhood, William H. Frishman, M.D. shouldered awareness of his family history of premature coronary disease—as well as a determination to do something about it. While a student at the Bronx High School of Science, he won the first of many national awards he would receive throughout his life—this one for summer research on hyperthyroidism and the heart at Hunter College and Cornell Medical School. "By the end of that summer," he says, "I knew I wanted to be a cardiologist."

Now, Dr. Frishman, the Barbara and William Rosenthal Chairman of Medicine at New York Medical College, Director of Medicine at Westchester Medical Center and councilor to Alpha Omega Alpha, the national honor medical society, has founded medical journals and published textbooks while presiding over an acclaimed department. But he says his busy days add up to a well-rounded life that's key to his success.

A PROMISING START

At the age of 16, young Bill Frishman enrolled in Boston University's six-

EVERYTHING IN BALANCE

By Melissa F. Pheterson

year liberal arts/medicine program, so by age 22 he was already a doctor. His colleagues and mentors were luminaries in their field. BU's Robert Wilkens, M.D., won the Lasker Prize for advances in the treatment of hypertension, and Frishman's two chiefs of medicine at Boston City Hospital both became editors-in-chief of the *New England Journal of Medicine.* His internship advisor at BU was Louis Sullivan, M.D., who would become Secretary of Health and Human Services under President George H.W. Bush. To support himself in school, Dr. Frishman worked at the Joslin Clinic, a major institution dedicated to diabetes, where many patients also had heart disease. On the side, he held the job of first-aid attendant at the Boston Garden sports arena.

He returned to New York to complete his internal medicine training at Montefiore Medical Center and Bronx Municipal Hospital Center and a cardiology fellowship at Cornell University Medical College in Manhattan. With the Vietnam War at its peak, Frishman enlisted in an Army program that allowed him to complete his training in a civilian hospital. He entered active military service as a chief of cardiology at U.S. Walson Army Hospital in Fort Dix, N.J., and served as front-line medical officer in a field unit with the 82nd Airborne Division in Fort Bragg, N.C. Of his service in the military medical corps he says, "It is a great privilege and honor to care for individuals and their families who have made a supreme sacrifice to serve our country." Frishman stayed in the reserves through Desert Storm in 1990 and achieved the rank of lieutenant colonel. For his military stint, he received the U.S. Army Commendation Medal for Meritorious Service. The state of New York awarded him the Conspicuous Service Cross, its highest honor.

MAJOR RESEARCH

Dr. Frishman entered the field of cardiac research during what he describes as its "golden era" of drug development. "I was involved in the development and introduction of almost every major cardiovascular drug used today—beta blockers, calcium channel blockers, angiotensin converting enzyme inhibitors, angiotensin receptor blockers and statins." At the Albert Einstein College of Medicine, where he rose to become associate chairman of the Department of Medicine and chief of medicine at Einstein College Hospital of Montefiore Medical Center, Frishman was a co-principal investigator in the Women's Health Initiative, a massive, historically significant clinical trial to study the effects of hormone replacement therapy in 160,000 post-menopausal women. He was also co-principal investigator in the Bronx Longitudinal Aging Study, which established risk factors for heart disease in the elderly.

In his laboratory at New York Medical College, Frishman researched thrombosis, regenerative medicine and stem cells, the potential future of cardiovascular disease treatment. "Our medical school and the Departments of Medicine and Physiology have been world

leaders in the area of cardiovascular regeneration and stem cell therapy," he says.

AWARDING EXCELLENCE

In his career, Dr. Frishman has taught more than 6,500 medical students and an additional 1,000 medical residents and fellows. "One lesson I learned from medical school is to find a mentor who watches over you," he says. "When you falter, a mentor picks you up and pushes you along to cross the finish line. I try to be that type of person for my students and residents now."

Frishman has received multiple accolades from New York Medical College for his skill as an educator, including 13 consecutive teaching awards from the students and residents. His national awards are just as numerous and impressive: he received the Association of American Medical Colleges (AAMC) Distinguished Teaching Award ("the Nobel Prize of medical education") in 1997 and was a finalist for that organization's coveted Humanism in Medicine Award in 2001. He was elected to Mastership, the highest level of membership, by the American College of Physicians-American Society of Internal Medicine. He has also received the American Heart Association's Teaching Scholar Award and the Preventative Cardiology Academic Award issued by the National Institutes of Health.

But the single honor you'll hear him talk about most is his involvement with Alpha Omega Alpha (AOA), the medical honor society. He is extremely proud of his service as a councilor for 33 years—first at Einstein and now at the College, making him the only AOA councilor in the nation to serve at two institutions. The AOA chapter at New York Medical College has been selected many times as the national chapter of the year for its community service and outreach, he repeatedly points out, adding with undisguised pride, "Through AOA, the school and its entire student body have gained a national reputation for excellence."

THE WRITING LIFE

To share his research findings, Frishman has written or collaborated with colleagues on more than 1,000 articles, with at least 10 published in the *New England Journal of Medicine.* He has founded two medical journals (*Clinical Hypertension* and *Heart Disease,* both now published under different titles) and penned 12 textbooks on such varied cardiovascular topics as stem cell therapy for heart disease, hypertension and alternative medicine. The third edition of his magnum opus, *Cardiovascular Pharmacotherapeutics,* was published in May and includes contributions from many former students, many of whom have become the nation's leading authorities in their own right.

"My purpose for writing books is to synthesize information for other physicians in a clear, concise and focused manner. Their success is my success," says Frishman. He rises early in the morning to write, and credits part of his success to the support of his devoted staff (pictured on next page). They include administrative secretaries Carol Ruggiero and Charlene Benincasa, editorial assistant Joanne Cioffi-Pryor, and department administrator Maryann Pratt. "Our publishing enterprise is really a mom-and-pop business," he says. Frishman is also an editor of *Cardiology in Review* (in conjunction with Harvard Medical School) and the *American Journal of Medicine* (the official journal of all chairpersons in medicine in North America).

"One lesson I learned from medical school is to find a mentor who watches over you," he says. "When you falter, a mentor picks you up and pushes you along to cross the finish line. I try to be that type of person for my students and residents now."

For 40 years, Frishman has somehow found time to maintain an active private practice as a generalist and cardiologist.

"We have a responsibility not just for physical healing, but for psychological and spiritual healing," he says. "After a heart attack, not all forms of healing happen at the same time. I had a patient who was very depressed after his heart attack even after his body healed. Recently, he came into my office and said 'Dr. Frishman, thank God I had the heart attack.' He learned to take more joy in his life, not

taking anything for granted. I said: 'now you're healed.'

"That's the joy of patient care," Frishman says. "They're always teaching you something new, revealing new truths."

An avid sports fan, the Bronx native has attended almost every Yankee opening game since 1951. He attends Yankees, Knicks and Giants games. But, he admits, "my major sporting activity is to take long walks with my wife Esther, my children, grandchildren and dog." Married for 40 years, Frishman helped raise "three wonderful children, who have settled in the area and have blessed us with six grandchildren—to date." Incredibly, he manages to visit all his grandchildren daily—just a brief stop on his way home from work, but one that helps him remember what's most important.

In his downtime before going to bed, Frishman enjoys reading about history. As a prolific author himself, he is drawing on the contacts he's made from the military for the book he is now writing about the physicians who have cared for the presidents and vice presidents of the United States. "Sometimes the only person the president can really trust, over and above his cabinet, is his personal physician," he says.

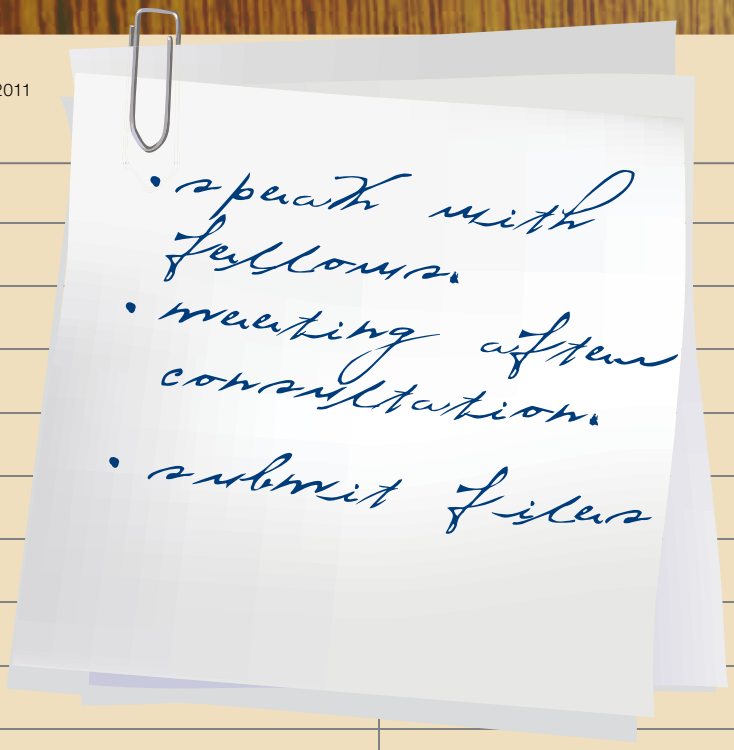
"AS PASSIONATE AS A THIRD-YEAR"

And the key to a happy and productive life? "Maintaining balance," Frishman says. "I am a better clinician because I'm an active researcher. I am challenged to be a better teacher by my students. I am a better researcher because I recognize the unsolved needs of my patients. I am a better administrator because I participate in all the activities of my faculty as a clinician, teacher and researcher."

A close colleague and former student is Stephen J. Peterson, M.D., vice chairman and professor of medicine. "Dr. Frishman is one of the most optimistic people you'll ever meet," he says. "He has never lost his passion for the art and science of medicine. He remains as passionate as a third-year medical student."

Ralph A. O'Connell, M.D., provost and dean of the School of Medicine, who was instrumental in persuading Frishman to come to the College after 25 years at Einstein, called him "a Renaissance man, a multifaceted individual who is as knowledgeable in history, the arts and baseball as he is in medicine. Everybody does well and everybody moves up because [Bill Frishman] raises the intellectual curiosity of all those around him."

For Dr. Frishman, though, greatness is achieved through the small and everyday things. "I look forward to every working day," he says, "with as much enthusiasm and zest as ever." ■



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☐ Allergies ☐ Family History ☐ On FIle

Last Visit		

Geriatrics comes of age in the Bronx

The College-sponsored fellowship in geriatric medicine at **Montefiore Medical Center (North Division)** has just turned 18. In a very real sense, the field of aging is finally reaching maturity.

By Nelly Edmondson Gupta

Many more trained geriatricians are needed to combat the nationwide shortage.

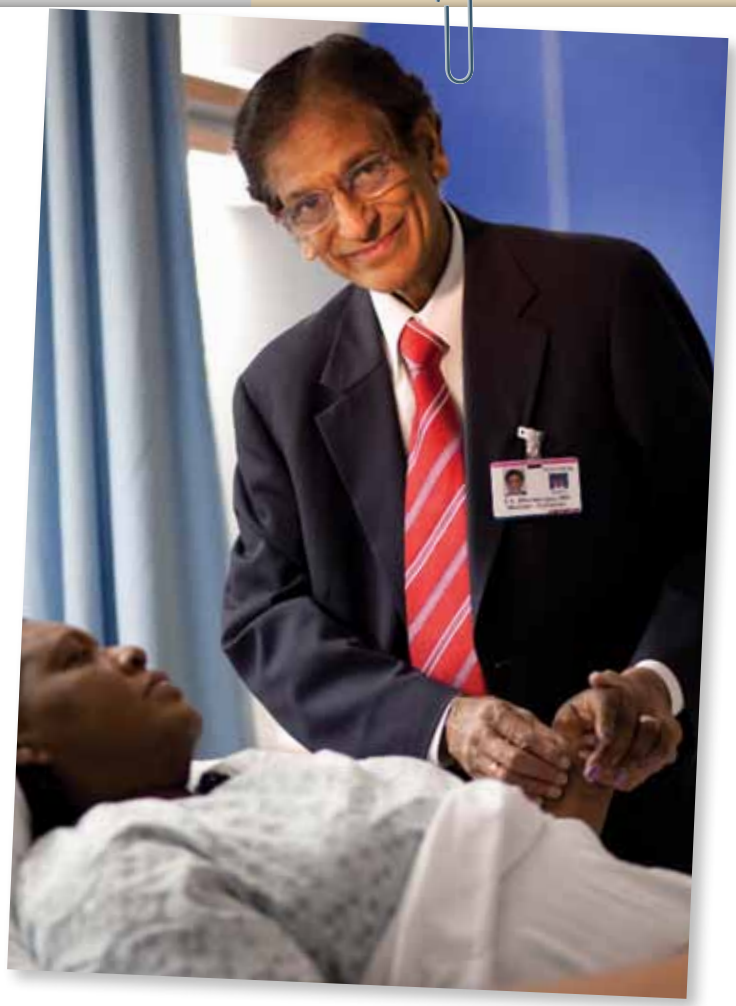
During rounds, T.S. Dharmarajan, M.D., director of the geriatric fellowship program, pauses to clarify a point with geriatric fellows Sowmya Thadisina, M.D., and Waleska Santiago, M.D., and resident Satish Nandyala, M.D.

On a bright morning in early spring, T.S. Dharmarajan, M.D., guided a visitor through the 69-bed geriatrics division on the fourth floor of Montefiore Medical Center's North Division. The College-affiliated hospital is located in the Bronx, at the former site of Our Lady of Mercy Medical Center. As they traversed the corridors, the fellowship and residency program director pointed out the glare-free lighting fixtures, rounded handrails and diamond-in-the-middle floor pattern, which is designed to help people with dementia navigate without falling. "They perceive the diamonds as holes, and instinctively move toward the railings," he explained. "Many people don't notice these innocuous-looking designs, but they're very important."

Seeing his obvious pride in the unit, it's surprising to learn that the man who's often referred to as "Dr. D" didn't always aspire to being an expert in geriatric medicine. The fact is, many medical students and new doctors initially shy away from what they perceive as a specialty both unglamorous and unrewarding. Even when Dharmarajan was asked to start a geriatric medicine division—a real opportunity to make his mark—he balked. He had been a successful nephrologist and worried that taking his career in this new direction would be a mistake. But many more trained geriatricians are needed to combat the nationwide shortage, he says, and "no one in the tri-state area except Mount Sinai had such a program, nor any idea how to develop one."

So despite his misgivings, Dr. Dharmarajan rose to the challenge, and in April 1992, he and nurse manager Rosemarie Lifrieri, R.N., M.S.N., M.B.A., kicked off a pilot, 17-bed inpatient geriatrics unit. Shortly thereafter, he was told to develop a fellowship program to go with it. "In July 1993," he recalls, "one fellow entered the program—reluctantly." It marked the beginning of a turnaround, not only in his perception, but also in the lackluster reputation of geriatric medicine.

Today, 18 years later, the New York Medical College-sponsored Geriatric Fellowship Program at Montefiore's North Division, where Dharmarajan is currently vice chairman of medicine and associate dean, is thriving. With a complement of eight fellows, it is one of the largest and most highly acclaimed in the nation. In 2008 it received five-year approval (the maximum achievable, later increased to six) from the Accreditation Council for Graduate Medical Education (ACGME), indicating a high level of confidence. And just weeks after showing his visitor around, he got word that the ACGME had approved a permanent increase from



8 to 10 fellows. As the program has grown, so has Dharmarajan's estimation of geriatrics shifted dramatically. "Along with marrying my wife," he declares, "going into geriatrics was the best decision I ever made."

Besides honing their clinical skills, most fellows teach, do research, and at the end of the year-long program, take the geriatric medicine certification exam conducted by the American Board of Internal Medicine. After that, while some fellows enter academic medicine, the majority go into clinical practice.

A GRANDMOTHER'S LEGACY

When Sowmya Thadisina, M.D., was growing up in Hyderabad, India, she helped care for her grandmother, who for the last ten years of her life was bedridden with undiagnosed neurological problems. At the time, she says, "I had the feeling we could have done more for her, but we didn't know what to do."

Now Dr. Thadisina is learning how to help countless numbers of elderly patients to achieve a better quality of life. "I'm confident I'm learning the correct way to approach patients and their families," says Thadisina, who began a year-long fellowship at Montefiore's North Division after completing her residency in family and preventive medicine at the University of Arkansas in Little Rock.

Along with the other geriatric medicine fellows, Thadisina deals with a wide spectrum of patients age 60 and older. Their diagnoses run the gamut from constipation and hypertension to type 2 diabetes, hip fracture, dementia and heart failure. In addition to the hospital, the geriatric fellows see patients at local outpatient clinics, nursing homes and adult daycare facilities and in patients' homes.

Dealing with older patients in a variety of settings teaches key lessons about caring for this population. One of the most important is learning how to distinguish between a person's chronological and physiological age. "Your chronological age is just a number," explains Dharmarajan. "A physically fit 70-year-old can have the functional capacity of a much younger person, while those who smoke and are sedentary may function as if they were decades older."

Fellows also must learn the difference between physical changes brought about by normal aging and those caused by disease. They also need to understand the potential dangers of *polypharmacy*—the prescribing of many medications—a critical skill, since up to half of American adults aged 65 years or older take five or more different medications daily, as well as non-prescription remedies and supplements. This puts them at risk of adverse reactions from drug interactions. Sometimes these adverse reactions may simulate new illnesses, for which more drugs are prescribed, further complicating the problem. The fact that older patients may have cognitive and memory problems only adds to the challenges. "No one comes in and says 'I have Alzheimer's disease,'" notes Dharmarajan, who insists it's the geriatrician's responsibility to figure out whether someone has the capacity to understand and comply with treatment recommendations, and to set up reminders or enlist the help of caregivers.

BEYOND THE BEDSIDE

Caring for older patients requires more than clinical expertise. "You have to have a lot of love to do this kind

of work," says geriatrics fellow Waleska Santiago, M.D., who entered the program last September after completing her residency in Puerto Rico. In addition to addressing a patient's medical issues, geriatricians must be able to connect emotionally with patients and their families and friends. "To be truly helpful," she explains, "you need to look at the patients' social lives, daily activities and home environments."

One of Santiago's most memorable patients was a woman who worked as a home health aide. The first time she sought care she was seriously ill but was afraid to go to the hospital because she didn't have health insurance. After talking with the faculty geriatrician, she agreed to be admitted. While there, she saw how her doctor placed her health needs ahead of financial considerations and made sure she received the inpatient care she needed. Later, it came to light that this woman's daughter had stolen her elderly mother's life's savings of $5,000, and the only person the patient told was Santiago. "It was a defining moment for me," she says, "when I realized how much patients trust you, and how sacred the patient-doctor relationship really is."

As challenging as geriatrics is for Dr. Santiago, she finds it particularly fulfilling, and believes having some life experience under her belt is a real plus. "It helps a lot in terms of dealing with patients," she says. "If you've already been hospitalized a couple of times, and faced financial and other problems, you tend to be more realistic."

This means that even when she cannot cure her patients, Santiago takes satisfaction in helping them cope. "As you get more experience, you realize that older people with chronic diseases like heart failure, Parkinson's disease and emphysema *can* stay active and have productive lives if they get the right treatment," she says. "People with chronic illnesses are living longer. They're not just waiting to die. The picture is much rosier today, which makes our role even more important."

> " The societal need for experts in geriatrics is enormous and growing. Because of Dr. Dharmarajan, and with the continuing support of Montefiore Medical Center, the College is a leader in addressing this need."
>
> *–Richard G. McCarrick, M.D*

Her colleague Dr. Thadisina concurs, saying she, too, finds fulfillment in playing such an important role in her patients' lives. "The patient's family looks up to you," she says. "They are looking for someone to help them manage their own lives while caring for their loved ones. I'm happy to be that person. And I like the fact that my involvement doesn't stop with the patient."

Richard G. McCarrick, M.D., vice dean for graduate medical education and affiliations, agrees with the importance of recognizing the breadth and depth needed to be a good geriatrician. "Geriatrics is one of the most challenging fields of medicine, due to the broad range of knowledge required. Like pediatrics, it deals with all diseases encountered in a particular age group, so in addition to general internal medicine, geriatricians must know a great deal of neurology, psychiatry, physical medicine and pain medicine," he says. "The societal need for experts in geriatrics is enormous and growing. Because of Dr. Dharmarajan, and with the continuing support of Montefiore Medical Center, the College is a leader in addressing this need." ■

Getting CREATIVE with the Curriculum

By Melissa F. Pheterson

How students explore career interests, begin thinking like scientists, and learn how to answer questions as well as how to ask them.

How do you maximize the teaching of medical students at the patient's bedside without creating a bottleneck? How do you keep the curriculum fresh, relevant and responsive to the changing dynamics of medicine? And how do you grant medical students sufficient opportunity to explore career interests before they begin interviewing for their residency? Creative thinkers in the School of Medicine have found an answer in a new and innovative curriculum program known as "selectives."

"A 'selective' describes part of the curriculum that's somewhat elective, but with a list of options from which students must choose," says Paul M. Wallach, M.D., vice dean for medical education. Last July, the School of Medicine began offering some 100 selectives, starting in the third year of medical school. The program provides a way to rotate students through their major clerkships and then into a selective that still relates to the clerkship but does not draw from the same resources. Three out of seven clerkships—internal medicine, pediatrics and surgery—have carved out two weeks for selectives that focus on sub-specialties, recent breakthroughs or research findings from a related field, with encouraging results.

"We are seeing a national trend among many medical schools seeking ways to allow students more choices in the third year," says Gladys M. Ayala, M.D., M.P.H., senior associate dean for student affairs and a member of the team that put together the program. "The goal is to offer a more diverse range of educational offerings that will allow some exploration before a student's career path is set in stone. We've been careful to arrange selectives in a manner that complements the weekly clerkship themes and core curriculum. This allows students a broader and deeper educational experience—one that goes beyond the core curriculum without distracting from its most important tenets."

Jennifer L. Koestler, M.D., associate dean for medical education, is another member of the think tank that helped restructure the curriculum, fitting more students into a complicated matrix of clinical

training opportunities that is becoming tighter every year. For Koestler and her fellow forward-thinking educators, the selectives option is a clear win for students. "Part of the role of a selective is to permit students to try out something they might not otherwise learn about, and also pursue interests they are passionate about," she says. One selective in surgery, for example, is devoted to hyperbaric medicine to review new wound care therapies. Selectives in pediatrics include adolescent care, genetics and metabolism, neurology and developmental psychology. In their fourth year, students take two more selectives—one in emergency medicine, another of the students' choice—for a total of five. The small class size (fewer than ten, often just one or two enrollees) allows professors and students to become better acquainted and speak their minds.

A TOUCH OF THEATRE

Among the most popular selectives—though you might not guess it by the name—is Translational Research, designed in response to new medical education guidelines that reflect "a growing interest in making sure medical school graduates understand medical research," Wallach explains. "That kind of bench-to-bedside process is how life-saving therapies are produced, but it's something few doctors could articulate. We wanted to ensure our graduates had a firm grasp on it."

Victor A. Fried, Ph.D., professor of cell biology and anatomy, conducts the selective in a room of archived books at the Health Sciences Library. "We're surrounded by ancient books of medical knowledge," he says. "It's great theatre—an almost mystical experience that hopefully gets them plugged in."

"We're surrounded by ancient books of medical knowledge. It's great theatre—an almost mystical experience that hopefully gets them plugged in."

—Victor A. Fried, Ph.D.

Once he captures their attention, he gets to the meat of the class: how to critically evaluate research. "So many people judge a study by the journals that publish it, or whether it was covered in *The New York Times,*" he says. "Patients can Google studies on cancer and diabetes and assume the findings apply to them." To Fried, the word "translational" has two different meanings. "First, what are the pathways by which basic knowledge is translated into practical outcomes for clinicians? Second, how do you translate new findings into lay language for patients who've been reading about them in the press or online?" Fried says he deploys "no specific technical material, just logic and common sense" to sharpen his students' analytic skills. "Patients will come in and say, 'Doc, I hear that if I go on a low-calorie diet, I'm going to live longer.' When we hear that, we look carefully at the paper to see if the data can justify the conclusions."

"I spend five years teaching critical thinking to graduate students," Fried allows. "In two weeks, I don't expect medical students to become experts, but I do want them to stop, think and ask the right questions." From the medical literature, each student evaluates a study that may be awaiting clinical trials. One student reviewed a paper that sought a link between the flu vaccine and autism and schizophrenia in mice,

Paul M. Wallach, M.D., Gladys M. Ayala, M.D., M.P.H., and Jennifer L. Koestler, M.D., comprise the close-knit team that has been strategizing new approaches to the medical school curriculum.

probing for design flaws and qualifiers. "The big questions arose: What were the controls? How well did the study measure DNA and RNA, or show viral load? Are the numbers statistically significant? What was the variance? How well can we extrapolate to humans?" Fried reflects that students may find his selective "an interesting break from their regular routine—where they're mostly answering, not asking, questions."

STUDENTS AS TEACHERS

On the flip side, selectives can also impress students' abilities upon professors. "It is enriching to spend two weeks in a row with the same student," says Ronald Jacobson, M.D., who directs the selective in pediatric neurology. The clinical associate professor of pediatrics and chief of pediatric neurology at Maria Fareri Children's Hospital says, "What captured my interest and opened my heart was how much I enjoyed learning from my students. They bring a high degree of personal insight to our interactions."

Jacobson's students join him in seeing patients at his faculty practice in Sleepy Hollow, N.Y. "Outpatient issues in neurology tend to be much more diverse than what students would encounter in hospital rotations," he says. "[In the selective] we often have an hour-plus to get to know the patient and explore these issues in depth." He makes sure the students get a thorough grounding in the basics, but he also reaches beyond medical matters to discuss ethical concerns, and will often factor in the parents' perspective for a rich assessment of each patient's condition.

"What does [the condition] mean for the child, his life, his family? How do parents feel about sending a child with seizures back to school? What if a child has debilitating headaches and can't leave the house? We're able to go way beyond textbook descriptions," he says. Each student selects a patient's case—often a highly specific condition that spans multiple fields—and develops a PowerPoint presentation. "The students become my teachers," Dr. Jacobson says, praising both their research skills and their computer savvy. "These PowerPoints are professional enough to use as formal teaching tools. I'm assembling an entire library of them," says Jacobson.

Julie Grimes, Class of 2012, enrolled in pediatric neurology last summer to gauge her interest in the field. Observing Dr. Jacobson treat a broad spectrum of neurological conditions was "enjoyable, educational and inspiring," she says. "He was always so focused and attentive. Since then, I have made a concerted effort to incorporate those valuable conversational

skills into my own interactions with patients." In selecting a topic to present, Grimes chose that of an 8-year-old boy who had complained of fainting during baseball practice. "His father noted that, unlike the other boys, his son did not sweat," she says—suggesting a disorder of central thermoregulation. "When I mentioned this, Dr. Jacobson smiled and pulled a textbook off his shelf, opened to a dog-eared page, and handed it to me." It was a chapter on pediatric disorders of the hypothalamus and pituitary gland that he wrote in 1999. "At that very early stage in my third year," she says, "the experience of thoroughly researching a specific topic relating to patient care was a transformative one." For her, the selective "has been truly one of the highlights of my time at New York Medical College."

While the selectives program was conceived, approved and deployed in record time, necessitated by the closing of Saint Vincent's Hospital, Manhattan and the attendant reshuffling of clerkships and residency programs, the benefits to students, faculty and the College have more than made up for the time crunch. "We started out thinking we had a good idea that might help to offset the need for more clerkship sites," says Dr. Wallach. "Once the selective programs were in place, however, we realized we had a way to bring our medical school curriculum to a whole new level. It's been a quantum leap in what we can offer our students." ■

"Outpatient issues in neurology tend to be much more diverse than what students would encounter in hospital rotations. [In the selective] we often have an hour-plus to get to know the patient and explore these issues in depth."

—Ronald Jacobson, M.D.

Ronald Jacobson, M.D., knows that even a neurological exam can be fun. He demonstrates his method to medical student Julie Grimes and his patient, six-year-old Cyrus Arjomand.

Graduate Students

POLYMERASE DELTA: DNA REPLICATION AND REPAIR JOIN FORCES

By Christine LeRoy

Almost all cancers are directly related to mistakes in our DNA genetic code, producing mutations that lead to unregulated proliferation. The faithful maintenance of the structure and order of the bases along the DNA strands is of utmost importance to cellular function and disease prevention. As the cells in the human body divide, each DNA strand must be accurately copied. Yet each cell is constantly subjected to damage to its DNA—from environmental chemicals, including some that are similar to those used in cancer chemotherapy, and from normal cellular metabolism. A number of mechanisms exist to rectify the situation: elaborate signaling pathways detect DNA damage, and then activate and orchestrate a range of cellular responses that include DNA repair.

In our laboratory we are studying DNA polymerase. This protein, one of the central enzymes involved in DNA replication, is made up of four subunits that add DNA bases to the growing strand with incredible accuracy and speed during replication, and are also involved in DNA repair. Our laboratory has discovered that when cells are exposed to specific agents that damage the DNA, P12, the smallest subunit of DNA polymerase, is degraded, thereby generating a 3-subunit enzyme. Our laboratory has demonstrated that this 3-subunit enzyme displays a decreased tendency to insert the incorrect DNA base onto the growing DNA strand, indicating that p12 degradation in response to DNA damage could be a mechanism to prevent incorporation of mutations into the DNA in the face of damage.

We have determined that p12 degradation is dependent on at least one major protein, ATR, which is central to the cellular response to DNA damage. We are currently trying to determine the role of the related protein, ATM, in p12 degradation, and we will further determine which proteins are involved in the mechanisms that lead to p12 degradation. We also hope to determine whether different mechanisms are utilized for the degradation of p12 in different stages of the cellular life cycle. An in-depth analysis of the response of DNA polymerase to DNA damage will contribute to the growing knowledge of how human cells respond to and repair DNA damage. Such knowledge could potentially lead to new molecular targets for the generation of chemotherapeutic drugs against cancer.

➤ **CHRISTINE LEROY,** *originally from West Caldwell, N.J., is an M.D./Ph.D. candidate in the laboratory of Marietta Lee, Ph.D., professor of biochemistry and molecular biology. Ms. LeRoy joined the M.D. program in 2006, and entered the M.D./Ph.D. program in 2008. She has embraced the opportunity to perform research to improve understanding of the molecular mechanisms that guard the cell against mutation and cancer pathogenesis. She recently received the Ruth L. Kirschstein Predoctoral M.D./Ph.D. fellowship from the National Institutes of Health. Ms. LeRoy ultimately intends to pursue a career in academic medicine working as a physician-scientist, allowing her to be involved in patient care as well as the advancement of knowledge that will lead to new treatments against cancer.*

Explain It All for You

TOXOPLASMA: ARE YOU INFECTED?

By Sini Skariah, M.S. '05

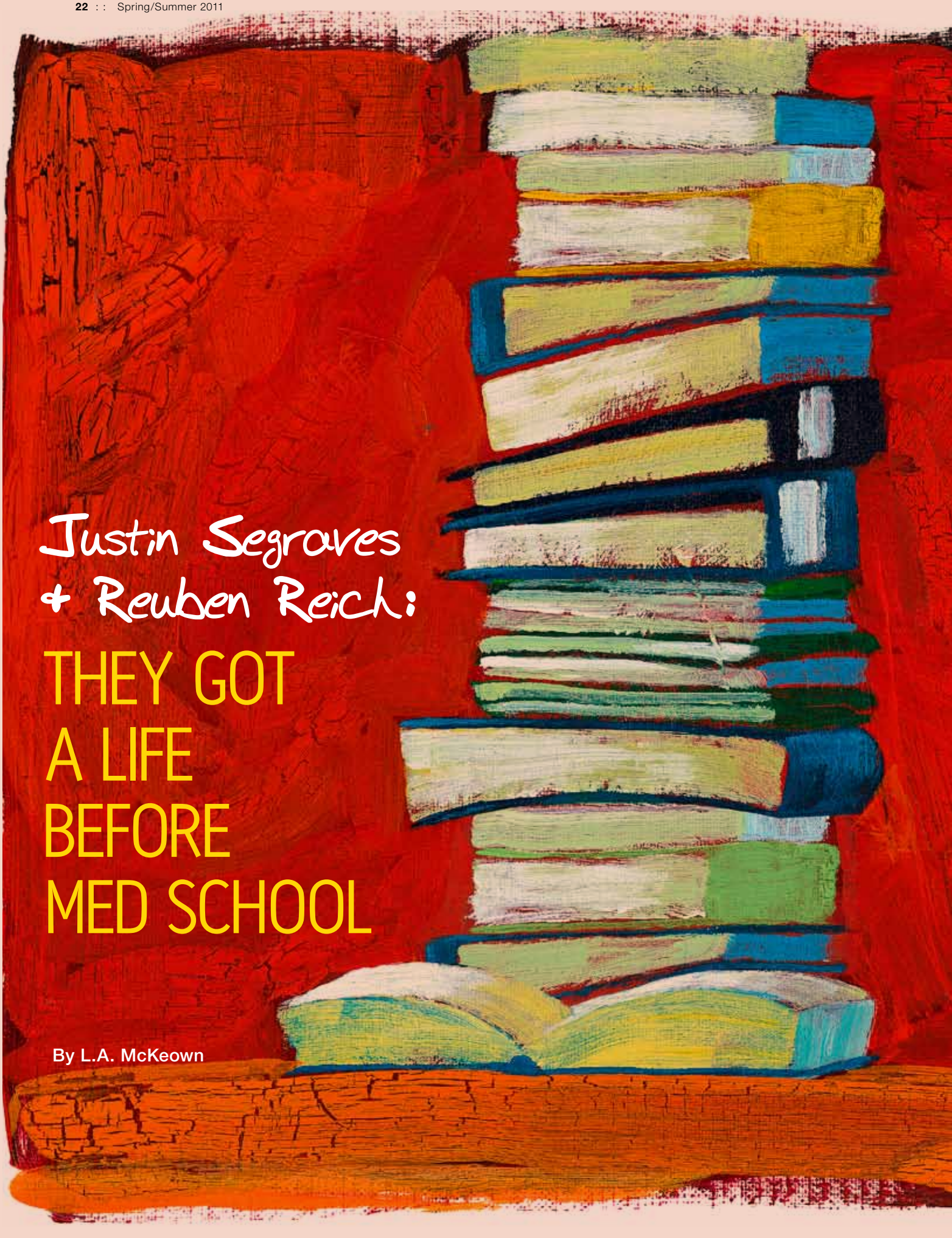
Where the research focus is on *Toxoplasma,* a parasitic protozoa that causes toxoplasmosis in humans, the question is not an idle one. Approximately 25 percent of adults in the U.S. carry the infection, commonly acquired by ingesting food or water contaminated by the cyst forms of the parasite. In infected individuals, the parasite forms latent cysts that are found primarily in the brain and muscle tissues and can persist for years. Although the infection is generally asymptomatic in healthy individuals, it poses serious health risks in people with depressed immunity, such as transplant recipients and AIDS and cancer patients. It can also be passed to a fetus across the placenta. Treatment is available for controlling early stages of the infection but no medications are available that can target the cysts once they have formed.

The parasite requires a host cell to grow and replicate as it lacks necessary components to sustain life outside the host cell. Macrophages are specialized immune cells that generate a response to infections. The body activates these macrophages to kill infectious agents. *Toxoplasma* has evolved to be capable of infecting and replicating within macrophages themselves, even using them for dissemination to the brain and muscle tissues where it forms cysts. In fact, *Toxoplasma* is able to protect itself within an infected cell by modifying it to its liking.

Our goal is to identify mechanisms by which this pathogen survives within and even modifies macrophages that are genetically programmed to destroy it. Identification of such mechanisms should provide researchers with targets which, if blocked, can help contain the parasite and block formation of its cyst stage.

Using a genetics approach, we have identified two novel parasite genes that enable *Toxoplasma* to survive within macrophages. These gene-encoded proteins play a role in countering the nitrosative stress generated within activated macrophages. Such immune evasion mechanisms allow *Toxoplasma* to survive within innate immune cells and use them for dissemination. Ongoing work in the lab is aimed at identifying other genes and mechanisms by which *Toxoplasma* replicates in macrophages.

➤ **SINI SKARIAH, M.S. '05,** *born, raised and educated in New Delhi, India, has been working toward her Ph.D. in the laboratory of Dana G. Mordue, Ph.D., assistant professor of microbiology and immunology. During her studies toward first a bachelors and then a master's degree in microbiology at the University of Delhi, she became interested in doing research that would integrate infectious diseases and immunology. Her ongoing work with Dr. Mordue has helped her achieve that goal, and she now hopes to increase understanding of how pathogens can establish chronic infections and find novel ways to target them for eradication. Ms. Skariah, who graduated with distinction in May, is this year's winner of the Graduate Faculty Council award to a Ph.D. student showing noteworthy academic achievement and creativity.* ■



Justin Segraves + Reuben Reich: THEY GOT A LIFE BEFORE MED SCHOOL

By L.A. McKeown

These two future docs believed medical school wasn't part of their plans. Sometimes plans change.

A native Texan, Justin Segraves, Class of 2014, began his college career in engineering, but quickly realized it wasn't for him. When his grandmother became ill and required a colostomy, the time he spent in and out of the hospital with her, observing the level of care she required, motivated him to try a career in nursing.

"I knew that ultimately what I wanted to do was interact with and care for patients. At the time it seemed that nursing was the best fit for me. I honestly believed it for a very long time," he says.

Working on a gastrointestinal surgery floor at MD Anderson Cancer Center in Houston during training, and again after graduating with a B.S. from the University of Texas at Houston School of Nursing, Segraves was drawn to the specialty of wound, ostomy and continence care. Working with patients who were especially vulnerable, he says, "was not only technically challenging and rewarding, but it also gave me the opportunity to work with the underlying emotions of the patients themselves." Recalling his grandmother's experience made him keenly aware of the powerful role a nurse can play in helping patients adjust to their situation.

BACK TO SCHOOL

While the idea of medical school didn't initially appeal to him during his college years, he was thirsty for knowledge and eager to have more say in how patients should be treated. With the encouragement of his wife, Yun Shin Chun, M.D., a surgical oncologist whom he met while working at MD Anderson, Segraves began applying to medical schools. Soon after, his wife, who was pregnant with the couple's first child, accepted a position as an attending surgeon at Fox Chase Cancer Center, and they moved to Philadelphia. For a year, he was a stay-at-home dad for their son, Joshua, while waiting to hear if he had been accepted to medical school.

"The whole experience has been humbling in many regards. To go from having a good career to becoming a full-time student again was scary," he says. "There were many obstacles we needed to overcome as a family, too. My mother-in-law came from South Korea to stay with us and help out with our son for six months. I'm so grateful to her and I don't know what we would have done without her."

Now 28, Segraves just completed his first year at New York Medical College, a school he chose as a near-perfect fit for multiple reasons. Besides being impressed by the caliber of the curriculum and clinical experiences, the College just happens to be his wife's alma mater (she is a 1999 alumna). Even better, its location within a reasonable distance of home enables him to commute to Philadelphia to be with his family on weekends.

"I stayed really focused and treated my studies like a job. I would study until 4 or 5... and if I had more work to do I would do it after [the kids] had gone to bed."

—Reuben Reich, Class of 2011

So every Friday he leaves campus and drives three hours to their home in the Philadelphia suburbs, staying until early Monday morning to squeeze in as much family time as possible. Overall, Segraves says he is enjoying the medical school experience and feels a sense of accomplishment in returning to school and doing well.

"My previous experience with patients has given me some perspective," he says. "There really is so much you need to know to fully care for patients. Seemingly irrelevant information you encounter as a medical student often turns out to be quite relevant in the clinical setting. I think my prior nursing experience gave me a good understanding of that."

FAMILY MAN TO MEDICINE MAN

Growing up with a mother and father who were both physicians, Reuben Reich, Class of 2011, always believed he wasn't the type to go into medicine.

"To be honest, my plan was to do anything *but* go to medical school. My parents gave me plenty of their time, but they both worked a lot and I grew up in an environment in which they were very busy. Couple that with not having much liking for blood," he jokes, "and I didn't believe I would ever want to go into medicine."

While attending college in San Diego, Reich studied business, "which seemed like a reasonable choice at the time." After graduating with a B.A. in business administration in 1999, Reich worked at several positions in the business sector. That included one with a start-up Internet technology company that offered just about everything he was seeking in a job. But, as he now says, "I didn't feel like I was doing anything meaningful, and that bothered me."

It was then that Reich began to soul search. After taking a number of personality and career inventory tests, he found out something his father already knew: his ideal career path wasn't business, it was medicine.

Through a post baccalaureate premedical program, he completed the science courses he needed to apply to medical school. Then he headed back to his home state of Colorado, where his wife Carly was pursuing a master's degree, and took a job as a clinical research associate in cutaneous oncology at the University of Colorado Health Sciences Center. He and Carly bought a house and had a son, Liam. When Reich was accepted at NYMC, he deferred enrollment for a year to give himself and the family time to sell their house and prepare to move across the country with their infant. The Reiches settled into student housing on the Valhalla campus in the summer of 2007.

Landing a research fellowship in the Department of Cell Biology and Anatomy before his second year only made more demands on his time. Then last year he won a distinguished Physicians of Tomorrow scholarship from the American Medical Association, which required high academic standing and a demonstrated commitment to community involvement. But despite his hectic schedule, he managed to juggle studies and community obligations with family responsibilities, which included the birth of the couple's second child, Brigitta.

"I stayed really focused and treated my studies like a job. I would study until 4 or 5 in the afternoon and then come home and have dinner and play with the kiddos and help with baths and bedtime," he says. "If I had more work to do I would do it after they had gone to bed."

At the age of 34, Reich can look back and say, "I have no regrets. It's been a longer, possibly more arduous route for me but it's all been worth it."

A CALL TO DERMATOLOGY

Reich's experiences outside of medical school may have shaped his future. While at the University of Colorado, he worked with patients with late-stage melanoma and cutaneous t-cell lymphoma, and realized how much he enjoyed the specialty of dermatology. Although residencies in the specialty are extremely competitive, Reich was determined to apply for one, doing several away rotations in dermatology to gain experience. Although he had hoped to take his family back to the West Coast, that has been put on hold for now. This past March he learned that he had landed a prestigious match in dermatology at Brown University in Rhode Island, where he will begin his residency after a preliminary year at Greenwich Hospital in Connecticut.

As always, Reich's family will be by his side for the next phase of his journey. None of it would have been possible without Carly, whom he describes as "the rock of our family, extremely supportive and adventurous." They hope their children, now five and two, will look back on these years as "a grand adventure."

In preparing to leave New York, where the family spent many happy hours at the Bronx Zoo and traipsing the walking trails of the Hudson River, they look forward to the quintessential New England life that awaits.

"It's going to be a great experience," Reich says. "We're all very excited about it." ■

ALUMNI NEWS

A neurosurgeon-intensivist treats patients in the ICU after saving their lives in the ER. Talk about multi-tasking.

By Marjorie Roberts

GREGORY T. SHERR, M.D. '04, M.P.H. '04

"It's not brain surgery!" This healthy put-down not only works to bring someone down a peg, it also confers a certain confidence that anyone who practices neurosurgery is in a class by himself. And so it is that Gregory T. Sherr, M.D. '04, M.P.H. '04, is designated a neurosurgeon-intensivist based upon the arduous training that took more than a decade to pull off. That's what it entails when you change occupations and leave other talents behind to doggedly pursue an ever-evolving dream. He has finally fulfilled the promises he made to his mentors, friends and family—that no matter what it took, he would succeed in becoming a trauma neurosurgeon. Dr. Sherr really did it "his way" by pursuing fellowship skills that usually are gained after a residency is completed. As a result, in his first year of practice he is certified to perform complex neuro-trauma surgery and is a qualified, fellowship-trained intensivist.

Gregory T. Sherr, M.D. '04, M.P.H. '04 came to the College as its first webmaster. Now he's the first webmaster-turned-neurosurgeon. (Photo by Paul Middlestaedt)

Greg Sherr got his M.D. degree from the School of Medicine and his M.P.H. in medical informatics from the School of Public Health together in May of 2004. As a College employee and an early admissions applicant, he navigated the admission process handily. There were some who wondered, did he have an ulterior motive when he accepted the position as New York Medical College's first webmaster in 1997? With a slight shrug, he never answers the question. He brought so much experience and authority to the job from his prior job working on the Columbia University website that he was able to help elevate web services for the entire Valhalla campus. Sherr built the College website from a handful of pages to many thousands, until departments all around the university were vying to get their pages done. But as hectic as the job was (he regularly sent emails at 3 a.m.), and how routinely he exceeded expectations, it never diminished the fire in his belly for medical school.

GRAVITATES TO NEUROLOGY

"I was looking for a strong medical program at the same time I was working in information technology, programming in multiple languages," he says. "While building the home page for the Department of Neurology, I developed a strong bond with the chairman [Joseph Masdeu, M.D.], who along with Steve Marks [M.D., professor of neurology] mentored me on my path to becoming a neurological surgeon." What turned out to be the critical mass during his first year of medical school was his leadership of Student Physician Awareness Day (SPAD), and his meeting with the keynote speaker, the late Fred Epstein, M.D. '63.

"I had the great honor of befriending and working with Fred, a giant in the field of neurosurgery. It was his challenge and inspiration that helped guide me toward a career that has been both grueling and rewarding in ways I never would have expected," says Sherr of the pediatric surgeon who became famous for saving the lives of children with brain stem tumors that had been considered inoperable.

As he gathered a trusted core at the College to help and advise him, Sherr began to disengage from the protective envelope of Columbia, where he had completed his undergraduate general studies and post baccalaureate premedical programs.

NOD TO MINNESOTA

Sherr matched for residency at the University of Minnesota in Minneapolis and his wife Laura was admitted to the Ph.D. program in psychology. Like so many graduates before them, they stayed on there after he completed his residency. At the age of 41, Dr. Sherr seemed destined for an orderly private practice that would leave him time to revel with the couple's three-year-old son Zach, whom he modestly calls "very smart and adorable." But the easy way has never been Sherr's route. He is already managing a new venture that could actually put him on call around the clock, day after day. This is the Sherr method of multi-tasking—defined as two achievements for the price of one.

In addition to the modest house he bought on a resident's salary in Minneapolis, the Sherrs have a rented apartment in St. Cloud to mitigate a commute that even northern Minnesota can't escape. "I've been growing the neuro-trauma program at St. Cloud Hospital, which we hope will become a Level 1 center. St. Cloud is located near a recreational area where people hike, camp, cross country ski and snowmobile—which also makes it prone to disasters. Patients used to be flown down to the Twin Cities for care. Now if a neurosurgeon is on call, I am the first doctor they call," says Dr. Sherr. "Typically there is spine reconstruction involved and sometimes a head injury. I am fortunate to be able to control the recovery of the patient from start to finish. I can handle everything urgent that needs to be done—putting in central lines, tracheotomy, gastrostomy lines, ventilator management—things that neurosurgeons typically don't do. I do need to call on orthopedic and general surgeons when injuries involve the abdomen and the long bones. I call them the icing on the cake."

GRATIFICATION UNBOWED

Dr. Sherr has joined a small neurosurgical practice that services a large regional medical center where he can do it all. "I never went into it for the money," he says. "It's a gift to be able to do what I do…I've even had my 15 minutes of fame already." He is referring to news video from Fox 9 Twin Cities News in January that revealed the life-saving surgery he performed on a 16-year-old girl. That she survived the high speed rollover crash on her way to school on a snowy day was a miracle in itself, but Dr. Sherr's performance is good for two miracles. "It was quite scary…I was literally pulling bones away from the deep anterior spinal cord to relieve pressure," he told the interviewer. In the operating room he removed the fractured vertebrae and replaced it with an expandable titanium cage graft and then secured it in place with a plate and screw construct to allow bony fusion.

First-year medical students Greg Sherr and Chetan Deshpande appeared pleased after their White Coat Ceremony in the fall of 2000.

> "IF A NEUROSURGEON IS ON CALL, I AM THE FIRST DOCTOR THEY CALL. TYPICALLY THERE IS SPINE RECONSTRUCTION INVOLVED AND SOMETIMES A HEAD INJURY. I AM FORTUNATE TO BE ABLE TO CONTROL THE RECOVERY OF THE PATIENT FROM START TO FINISH."
>
> *—Gregory T. Sherr, M.D. '04, M.P.H. '04*

Born to help people, and to do it without an attitude, Dr. Sherr smiles as he recounts similarities between his story and that of William T. Couldwell, M.D., Ph.D, another College mentor who was chairman of the Department of Neurosurgery from 1997 to 2001: "His very first job was in Fargo, North Dakota, only 170 miles from where I am now. He came to the College and then moved on to a bigger challenge at the University of Utah. You know," he muses, "my wife loved living in Westchester County. Now, if only the College can make me chairman of neurosurgery…" ■

MILESTONES
ALUMNI ACHIEVEMENTS

In this section of *Chironian,* we publish the Class Notes sent by you, our readers. News items should be brief, timely—and legible! Submit Class Notes online at www.nymc.edu/AlumniAndDevelopment/Secure/address.asp, or mail to Alumni Relations, New York Medical College, 40 Sunshine Cottage Road, Valhalla, NY 10595. You can also follow us on Twitter—our user name is @NYMC_tweets.

THE 00S

Mohana Namle, M.S. '10, has a full-time position as an associate researcher in the Department of Clinical Immunology at Mount Sinai School of Medicine.

Ali Imran, M.P.H. '06, reports he is the head of the Department of Community Medicine at Al-Tibri Medical College and Hospital, Isra University in Karachi, Pakistan.

Joshua D. Quick, M.D. '06, who was married last year, is finishing up an active duty tour as a U.S. Naval Flight Surgeon with Marine Aircraft Group 29 at Marine Corps Air Station New River in Jacksonville, N.C. He will begin his residency training in anesthesiology at Massachusetts General Hospital in July.

Tim McClung, M.P.H. '01, serves as an adjunct lecturer in health care quality for the masters in health care administration program at Western Connecticut State University in Danbury, Conn.

THE 90S

Haru Okuda, M.D. '99, was named U.S. Department of Veterans Affairs' National Medical Director for the Veterans Health Administration Simulation Learning Education and Research Network (SimLEARN) Program.

Randy Goldberg, M.D. '97, was elected a fellow of the American College of Physicians.

Maria Scunziano-Singh, M.D. '93, resides and practices in the Tampa Bay area with her husband. They are employed in a busy practice with multiple specialties and primary care physicians. She focuses on complementary and alternative medicine and they reach out to the community through educational seminars, support groups and organic gardening. "We have four beautiful children and our first is a young teen who has a medical career already planned!" she writes.

Philip Goodwin, M.D. '92, reports the birth of his second daughter, Riley Elaine, who joins Mia Emily.

Jeffrey Marable, M.D. '90, is the medical director of ob/gyn at Columbus Neighborhood Health Center in Columbus, Ohio.

THE 80S

Van L. Wagner, M.D. '89, and his Heart of America Bariatrics practice, achieved a milestone by performing the 300th single incision weight loss surgery in St. Louis. Dr. Wagner developed the technique known as PeriUmbilical Laparoscopic Surgery.

Steven J. Litman, M.D., '87, was named to Castle Connolly's top doctors for pain management. He is an interventional pain management specialist with expertise in treating patients with acute and chronic pain from his office in Bay Shore, N.Y.

AT A PRESTIGIOUS MEDICAL SCHOOL, HE WEARS THREE HATS, ALL FOR THE LOVE OF SCIENCE.

BRIAN LAMON, PH.D. '07

By Andrea Kott, M.P.H.

His doctorate from New York Medical College had barely cooled before Brian Lamon, Ph.D. '07, landed not one but three jobs at Weill Cornell Medical College of Cornell University. Within just a few years of graduating, the young scientist was balancing duties as assistant dean of research development, director of medical student research and assistant professor in the department of pathology and laboratory medicine. Lamon won't say which one he likes best, partly because he resists being pigeon-holed, but mostly because he thrives on the interplay of all three.

Finding work in today's market is tough, especially for a recent doctoral graduate. Yet even before graduating, Lamon received an offer to do postdoctoral research in the lab of David Hajjar, Ph.D., the Frank H.T. Rhodes Distinguished Professor of Cardiovascular Biology and Genetics at Weill Cornell Medical College. Hajjar and Lamon first met in 2006 when Lamon, then president of the Graduate Student Association and chair of the Graduate Student Research Forum, invited Hajjar to be a guest speaker. The two hit it off immediately, recognizing their shared passion for the biochemistry of atherosclerosis, and it wasn't hard for Hajjar to recognize the young investigator's exceptional talent. Lamon had already co-published an impressive array of scholarly papers and earned several awards.

Since he officially began his postdoctoral research in Hajjar's lab, Lamon has enjoyed a meteoric rise at Weill Cornell. In 2009, he was appointed assistant professor and a year later, director of medical student research and assistant dean of research development. It is a full load, one that gives him the variety that he missed as a solo laboratory scientist. "I love teaching and interacting with others. That's something you don't get to do as a straight scientist," he says.

He is also a family man. He met his wife, Agnes McNamara, at New York Medical College when she was a medical student. Agnes, who was about to graduate with her M.D. as we went to press, will soon start her residency in anesthesiology at St. Luke's Roosevelt Hospital in Manhattan. Oh, and they are expecting their first child in June.

Brian Lamon, Ph.D. '07, who studied and researched hypertension as a graduate student here, now teaches, mentors and guides young scientists and medical students at Weill Cornell Medical College.

After earning his bachelor's degree in biology and French at Lafayette College in Easton, Pa., Lamon entered the College's pharmacology master's program; 18 months later he began pursuing his doctorate. He dedicated his graduate research—conducted under the tutelage of Alberto Nasjletti, M.D., professor of pharmacology—to studying hypertension, specifically the role that inflammation plays in the development of atherosclerosis, a subject for which the Department of Pharmacology is renowned.

As assistant dean of research development, Lamon is a pivotal player in the acquisition of nongovernmental funding for faculty research. As director of medical student research, he helps students identify the research opportunities they need to complete their advanced biomedical sciences requirement. "I run the experience component—getting them into the right lab, setting them up with the right mentor and finding funding," Lamon says.

Students need Lamon's approval before they can start a research project, which culminates in a final report. "It has to be a specific, scholarly, hypothesis-driven research component to complement their education," he explains. "They can't just shadow a physician." This year he has worked with some 50 students, helping them prepare grant proposals, secure letters of recommendation and write their reports.

Lamon is ambitious yet content, since his responsibilities, while varied, allow him to use his science to help others. "People tend to develop tunnel vision when they're doing the same things over and over," he says. "I have my hands in all the different aspects of the latest research. No two days are very much alike, which is nice." ■

Sanford Silverman, M.D. '86, was named one of the 70 best pain management physicians in America by Becker's ACS Review. Dr. Silverman is director of Comprehensive Pain Medicine in Pompano Beach, Fla.

Deborah Fried, M.D. '83, of Woodbridge, Conn., writes "Help. They're trying to convince me I am 54 years old and my kids are 18 and 20 and in college. It just keeps getting weirder!"

Joan Liman, M.D. '83, M.P.H. '93, reports the birth of her second grandchild Marissa Erin Gottlieb in January. She joins older brother Ryan Levi who is now 2½ years old.

Harriett E. Dickenson, M.D. '82, is still with the New York City Transit Authority.

Malcolm Z. Roth, M.D. '82, recently completed his term as president of the New York Society of Plastic Surgeons and is now president-elect of the American Society of Plastic Surgeons.

Brian Solow, M.D. '82, had a great visit with former classmates **Joseph Lobl, M.D. '82, Beth Karon, M.D. '82,** and **Barry Karon, M.D. '82,** while in Rochester, Minn., on business.

Clifford S. Deutschman, M.D. '80, is president-elect of the Society of Critical Care Medicine, the leading international organization dedicated to ensuring excellence and consistency in the care of critically ill and injured patients. Dr. Deutschman is professor of anesthesiology and critical care, attending physician on the surgical critical care service at the Hospital of the University of Pennsylvania and an internationally known NIH-funded sepsis investigator.

THE 70S

Richard H. Becker, M.D. '79, is practicing cardiology at Hudson Valley Hospital Center and serves as medical director of its hospitalists group. He is also a councilman on the town board of Cortlandt, N.Y.

John K. Conant Jr., M.D. '79, of Cheshire, Conn., closed his solo practice last year and is now doing locum tenens work part time. He looks forward to doing things he hasn't been able to do for the last 25 years and has no second thoughts or doubts about his decision to have a personal life again.

Steven M. Fruchtman, M.D. '77, is vice president clinical development of Spectrum Pharmaceuticals in Irvine, Calif.

Edward Jacobson, M.D. '75A, practices gynecology in Greenwich, Conn., specializing in cosmetic and restorative vaginal surgery and natural hormone replacement therapy. He also has secondary offices in Beverly Hills and London.

Dan K. Morhaim, M.D. '75, deputy majority leader in the Maryland House of Delegates, is a recipient of the American Medical Association 2011 Dr. Nathan Davis Award for Outstanding Government Service in the category Outstanding Member of a State Legislature. The award recognizes outstanding public service in the advancement of public health.

John T. Stinson, M.D. '75, of Rockville, Md., was named one of the 100 Best Spine Surgeons and Specialists in America by *Becker's Hospital Review.*

THE 60S

Lewis M. Feder, M.D. '68, was voted one of the top 100 cosmetic surgeons of the world at the International Academy of Cosmetic Surgery in Cartagena, Columbia in 2009.

Johanna A. Pallotta, M.D. '62, associate professor of medicine at Harvard Medical School and a senior physician at Beth Israel Deaconess Medical Center in Boston, is the recipient of the 2010 Outstanding Clinical Endocrinologist Award by the American Association of Clinical Endocrinologists.

Edwin S. Stempler, M.D. '61, specializes in non-operative orthopedics and osteoporosis diagnosis and treatment. His wife, Norma, helps him in his office. They are living in the same condo in Rancho Mirage, Calif., since they moved from New York three years ago.

IN MEMORIAM

Alumni

Wendy Ann White-Ryan, M.D. '93, died November 30, 2010. She was 45.

Karen F.T. Bladykas, M.D. '87, (Fifth Pathway), died July 16, 2010.

Eugene A. Seville, M.D. '81, died on November 2, 2010. He was 55.

David J. Arluk, M.D. '75, Ph.D., died August 18, 2009.

John J. Conroy III, M.D. '70, died April 3, 2011. He was 66.

Fred D. Sheftell, M.D. '66, died April 11, 2011. He was 70.

Martin I. Bertman, M.D. '65, died December 9, 2010. He was 71.

William M. Taylor, M.D. '64, died June 30, 2010. He was 72.

Michael G. Kinsella, M.D. '62, died October 13, 2009. He was 72.

Frederick E. Siefert, M.D. '60, died January 12, 2011. He was 80.

Charles D. McCullough, M.D. '58, died December 20, 2010. He was 81.

Donald A. Peck, M.D. '56, died March 26, 2011. He was 81.

F. William Bora, M.D. '54, died February 23, 2011.

Robert Hirsch, M.D. '54, died March 21, 2009. He was 83.

Robert K. Houlihan, M.D. '54, died November 10, 2010. He was 83.

Gerald H. Levin, M.D. '54, died May 27, 2010. He was 83.

Alfred Sporn, M.D. '54, died August 5, 2010. He was 83.

A.C. True, M.D. '54, died November 28, 2010. He was 81.

William F. Westlin Jr., M.D. '54, died February 28, 2011. He was 83.

William P. Mimnagh, M.D. '53, died March 3, 2010.

Joseph M. O'Connor, M.D. '53, died April 4, 2011. He was 87.

Anna M. Seebode, M.D. '53, died December 16, 2010.

Marvin A. Linder, M.D. '50, died August 13, 2010. He was 82.

Robert W. Niehaus, M.D. '50, died April 24, 2011. He was 85.

Michael H. Scoppetuolo, M.D. '50, died February 12, 2011.

Margot Ammann-Durrer, M.D. '49, died December 28, 2010. She was 88.

Donald L. Duerk, M.D. '48, died April 3, 2011. He was 87.

Donald Gribetz, M.D. '47, died April 10, 2010. He was 84.

Joseph T. Pedulla, M.D. '47, died April 5, 2011. He was 88.

Raymond E. Schipke, M.D. '46, died November 26, 2010. He was 88.

Ezra J. Epstein, M.D. '45, died November 23, 2009. He was 88.

Harry C. Sayre, M.D. '45, died November 26, 2010. He was 89.

Paul H. Stillman, M.D. '45, died October 24, 2008. He was 87.

Robert P. Brezing, M.D. '44, died December 31, 2010. He was 90.

Eleanor T. DePaoli, M.D. '44, died March 24, 2011. She was 91.

Michael R. Ettenson, M.D. '44, died February 16, 2011. He was 93.

George G. Green, M.D. '43, died January 2, 2011. He was 92.

Tobias M. Rubin, M.D. '43, died June 11, 2010. He was 93.

William Tenenblatt, M.D. '43, died March 18, 2010. He was 91.

Theodore R. Struhl, M.D. '42, died April 23, 2011. He was 94.

Matthew S. Mickiewicz, M.D. '41, died March 27, 2011. He was 95.

G.R. D'Amato, M.D. '39, died November 29, 2009. He was 95.

Regina G. Gabler Greenberg, M.D. '37, died July 22, 2009. She was 96.

Nicholas Knox, M.D. '37, died November 18, 2009. He was 97.

Faculty

Alvin Montreo Brown, M.D., clinical assistant professor of rehabilitation medicine, died September 26, 2010.

Chandler Thompson, D.M.A., M.S. '05, CCC-SLP, has successfully shaped a healthcare career around her encyclopedic knowledge of music and voice.

COMBINING THE SCIENCE AND ART OF VOICE

Chandler Thompson, D.M.A., M.S. '05, CCC-SLP

By Andrea Kott, M.P.H.

Without knowing what drives Chandler Thompson, M.S. '05, you might consider her, well…a groupie. After all, she counts among her clients Levon Helm, the two-time Grammy-winner and former drummer for The Band, as well as a host of other famous actors and musicians whose identities she is not at liberty to reveal. But Thompson isn't after backstage passes or autographs. She simply wants to combine the science of caring for the voice with the art of using it well.

As a speech-language pathologist, Thompson helps people overcome the effects of lisp, stroke, traumatic brain injury, stuttering, and cleft lip and palate on speech. She also happens to be a classically trained singer who specializes in working with professionals who need their voice to work and are therefore prone to vocal overuse. This includes teachers, cantors, actors and, yes, rock stars.

You may wonder how Thompson—who once eked out a living by singing at weddings, Friday night synagogue services and in church choirs—rediscovered herself as a clinical speech pathologist and vocal coach to rock 'n rollers. First, she accepted the improbability of ever making a living by singing. "It's very hard—unless you live in New York or Los Angeles or work for a cruise line," says the witty

Mississippi native. Next, she decided to shape a career around her encyclopedic knowledge of music and voice.

With a bachelor's degree in music from Louisiana State University, a master's from Mississippi College and a doctorate from Michigan State University, Thompson taught singing and other related voice courses for 15 years. She taught at Mississippi College, Middle Tennessee State University and Vanderbilt University and continued to sing on the side, which she still does. But preparing talented singers for a jobless market frustrated her. Besides, by the time she was in her late forties, she felt herself aging out of the field. "If you're famous, like Placido Domingo, the students want to take classes from you," Thompson says. "But if they see two or three younger people on the faculty, that's who they want." After her husband survived a near-fatal health crisis in 2002, she realized she needed a new, full-time career—with health benefits—and enrolled in the College's master's program in speech-language pathology.

The rigorous course work tapped into much of Thompson's expertise. Still, the two-year program, which entailed dissecting a cadaver ("I didn't know if I could *do* that!"), was tough. "In some ways, it was harder than earning my doctorate," she says. "I could have stopped being a singing teacher and gone into real estate. It would have been about the same learning curve."

She did neither. Instead, she became a sought-after clinician for facilities like the Westchester Institute for Human Development, the Horace Mann School and the Grabscheid Voice Center at Mount Sinai Hospital. She has also become a highly regarded voice teacher, referred by physicians and other singers she has met since earning her M.S. (SLP) degree in 2005.

Although coaching rock musicians and other celebrities is fun, it isn't easy, especially when she must persuade them that vocal repair takes time. "It's usually a confluence of events that causes vocal impairment—a hormone shift, a new baby, lack of sleep, reflux, a head cold and vocal misuse. Something in their anatomy has gotten out of balance. They can't fix that by themselves but they think they should be able to," Thompson says.

It can also entail some unusual tasks, like helping Levon Helm, a laryngeal cancer survivor, warm up his voice for a 4 a.m. taping of "Imus in the Morning," or tagging along to band rehearsals to see what might be aggravating a singer's vocal problems. Living on the road, performing in loud, dust-filled clubs and not getting enough sleep are all ingredients for poor vocal health, says Thompson, who analyzes what her clients eat, how much water they drink, the medications they take and how much sleep they get. "I have one band that sleeps in a school bus," she says of an up-and-coming group, one of many on her client list. She has also learned a technique to help rockers—many of whom have no vocal training—scream in a "technically healthy way."

"My goal is not to change their style," she says. "When a patient comes to me, and they're making it and have two CDs out…the goal becomes, how do we do this better?" Finding the answer to questions like this is what drives Thompson. "I like combining the science and the art," she says. ■

Alfred M. Freedman, M.D., professor and chairman emeritus of psychiatry, died April 17, 2011, at the age of 94. Dr. Freedman, a gifted psychiatrist and social reformer, served as chair of the Department of Psychiatry and Behavioral Sciences from 1960 until his retirement in 1988. During that time he built the department into an important teaching institution with a large residency program. He also significantly expanded the psychiatric services offered at Metropolitan Hospital, where he was director of psychiatry. Dr. Freedman was an international leader in his field, serving as president of the American Psychiatric Association, the American Psychopathological Association and the American College of Neuropsychopharmacology, and founding editor of the *Comprehensive Textbook of Psychiatry.* He received the College's first Terence Cardinal Cooke Award and the APA's Human Rights Award.

Edwin D. Kilbourne, M.D., professor emeritus of microbiology and immunology, died February 21, 2011 at the age of 90. A leading authority on influenza, Dr. Kilbourne was a member of the College faculty from 1992 until his retirement in 2002. He established the College laboratory that supplied the recombinant strains used in preparing the annual influenza vaccine used worldwide, and it continues today. Dr. Kilbourne donated a catalog of nearly 200 influenza virus reassortants and mutants to the National Institutes of Health to enable scientists free access to the library of viral artifacts, named the Kilbourne/New York Medical College Archive.

Bernard N. Nathanson, M.D., clinical associate professor of obstetrics and gynecology, died February 21, 2011 at the age of 84.

Ronald N. Ollstein, M.D., clinical professor of surgery, died December 30, 2010 at the age of 76.

Sidney Weinstein, M.D., research professor of psychiatry and behavioral sciences, died November 8, 2010.

Sidney P. Zimmerman, M.D., clinical assistant professor of medicine, died February 25, 2011.

Trustees

Robert C. Macauley died December 26, 2010 at the age of 87. He served on the board from 1990 to 1994.

Katherine Sullivan Meehan died February 16, 2011 at the age of 92. She served on the board from 1978 to 1995.

COLLEGE EVENTS &

Photos This Page

Alumni Reunion: The Class of 1986.

Commencement: Jennifer L. Sevush, M.D. '11, and her father Steven Sevush, M.D. '76.

Alumni Reunion: Karl P. Adler, M.D., chief executive officer, Eileen M. Dieck, M.D. '86, alumni association president, and Ralph A. O'Connell, M.D., provost and dean of the School of Medicine.

Alumni Reunion: David E. Asprinio, M.D., professor and chairman of the Department of Orthopedic Surgery, and 2011 Medal of Honor recipient Rudolph F. Taddonio Jr., M.D. '71.

Founder's Dinner: Alumni Association presidents Joseph F. Dursi, M.D. '59, Saverio S. Bentivegna, M.D. '50, Louis E. Fierro, M.D. '60, Eileen M. Dieck, M.D. '86 (current president), Christopher F. X. Riegler, M.D. '88, and Michael A. Antonelle, M.D. '62.

Alumni Reunion Luncheon: Henry Saphier, M.D. '61, Robert D. Green, M.D. '61, and Ms. Jacqueline Reilly.

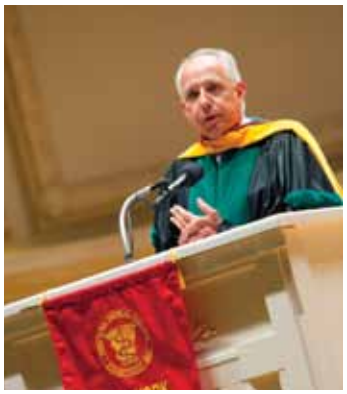
Alumni Reunion: The Class of 1961.

Photos Next Page

NYMC/Touro Barbecue: Alan Kadish, M.D., president, Dr. Mark Hasten, chairman of the Board of Trustees, and William H. Frishman, M.D., the Barbara and William Rosenthal Chair of the Department of Medicine.

Commencement: Richard J. Vasak, M.D. '11, and his mother Lisa T. Vasak, M.D. '92.

ALUMNI REUNIONS



Photos by John Vecchiolla, Roy Groething, and Susan W. Wagner

NYMC/Touro Barbecue: Alan Kadish, M.D., president, Rob Astorino, Westchester County Executive, Dr. Mark Hasten, chairman of the Board of Trustees, and Karl P. Adler, M.D., chief executive officer.

Commencement: Darrell G. Kirch, M.D., president and CEO of the Association of American Medical Colleges, gave the Commencement address.

Commencement: Ralph A. O'Connell, M.D., Karl P. Adler, M.D., Alan Kadish, M.D., and deans Francis L. Belloni, M.D., and Robert W. Amler, M.D.

Founder's Dinner: Surrounded by his family, Saverio S. Bentivegna, M.D. '50, center, received the 2011 William Cullen Bryant Award.

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Chironian

SPRING / SUMMER 2011

NEW YORK MEDICAL COLLEGE

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BUILDING A FUTURE, CONTINUING A LEGACY

It's official: New York Medical College is now part of the Touro College and University System, creating one of the largest affiliations of medical and health education and biological studies programs under one institutional banner.

An announcement was made on May 25, 2011, by leaders of both institutions at a press conference held at Bryant Park in New York City, named for the College's most well-known founder, 18th century poet and editor William Cullen Bryant. Touro President and Chief Executive Officer Alan Kadish, M.D., said, "Touro's goal is to help assure that the illustrious legacy, heritage, and accomplishments of New York Medical College are secured and that its momentum continues. We look forward to the synergy that will result from fusing two significant institutions and creating one of the broadest arrays of health science education programs available anywhere."

Karl P. Adler, M.D., NYMC's chief executive officer, said, "This affiliation will enhance the training of tomorrow's medical and health care leaders, and offer them exposure to the benefits of other professional study programs in law, pharmacy, allied health and the humanities. This kind of integration exemplifies how medicine and healthcare will be taught and practiced in the future. Joining our two institutions, and harnessing their respective strengths, is how we plan to address the future needs of healthcare delivery."

Later in the day Touro hosted a celebratory barbecue on the Valhalla campus, attended by some 1,200 members of the College community and guests from Touro. Westchester County Executive Rob Astorino was on hand to welcome Touro College to the county and to praise the union that will enhance both institutions.

The Touro College and University System educates approximately 5,300 students in medicine, health, and the biological sciences. Chartered in 1970 and headquartered in New York City, Touro is America's largest not-for-profit, independent institution of higher and professional education under Jewish auspices, now with approximately 19,000 students studying at 32 locations in New York, California, Nevada, and other states, as well as campuses abroad. In addition to a law school, graduate schools in several other disciplines, and an array of undergraduate schools, Touro operates three colleges of osteopathic medicine and two colleges of pharmacy,

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Norman Levine, Ph.D.
President, Faculty Senate

Watch the video of the May 25 press conference at www.nymc.edu/nymc-touro or scan QR code to watch on your smart phone!

At the May 25 press event in Bryant Park, Karl P. Adler, M.D., chief executive officer, and Alan Kadish, M.D., president, posed before a statue of William Cullen Bryant with a framed copy of the New York Medical College charter.

and offers programs around the country that train students to work in a variety of allied health professions such as physical therapy, occupational therapy, speech-language pathology, nursing, physician assistantship, public health, and other areas.

As part of the transaction, Dr. Kadish has been named president of New York Medical College, while Dr. Adler continues as CEO. A new board of directors, which includes four members of the prior NYMC board and is led by Dr. Mark Hasten, long-serving chairman of the board of trustees of the Touro College and University System, was officially seated on May 25.

Leaders of both institutions have said that they expect a seamless transition, with very few changes in the operation of the school. "The changeover has been remarkably smooth thus far, and we expect that pattern to continue as we all become better acquainted and begin working together," said Dr. Adler. "In essence, the College is remaining the same, with renewed prospects for a wonderful future."

He commented on the goodwill and positive atmosphere that have characterized months of preparation and collaboration involving many members of the College community. At a meeting between Dr. Kadish and the academic leadership on June 7, there was even more positive dialog. "The faculty is eager to interact with Dr. Kadish," said Norman Levine, Ph.D., president of the Faculty Senate. "We are pleased with the focus on research development and fundraising, and are very interested in being involved in what is to come."

Future campus meetings will address the financial resources that have been earmarked for the College, and will engage processes that will help determine how best to use these funds.

"We are delighted to welcome the New York Medical College community into the Touro College and University family," Dr. Kadish summed up. "We are committed to working together to maximize our collective potential as we pursue excellence in the teaching of medicine, the biomedical sciences and healthcare education."

New York Medical College

A Member of the Touro College and University System

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Touro* at a Glance

- Touro College is America's largest not-for-profit independent institution of higher and professional education under Jewish auspices.
- Chartered: 1970
- Enrollment: Approximately 19,000 students studying at 32 locations, mostly in New York but also in California, Florida, Nevada, Moscow, Israel, Berlin and Paris. Students are pursuing graduate and professional degrees in such fields as medicine, law, business, education, and Jewish studies, among other areas.
- Faculty: Total: 4,930—Full Time: 2,091—Part Time: 1,317—Voluntary/Clinical: 1,522
- Alumni: Approximately 74,561
- Operating Budget: $410 million
- Degrees and Programs of Study:
  Doctoral: Ph.D.
  Professional: D.N.P., D.O., DPT, Dr. PH, J.D., M.D., PharmD
  Master's: LL.M, M.A., M.B.A., M.P.H., M.P.S., M.S., M.S.W.
  Bachelor's: B.A., B.P.A., B.S.
  Associate: A.A., A.A.S., A.O.S., A.S.
- Certificates: Various certificate degree programs offered at graduate and undergraduate levels, in such areas as bilingual education, school leadership, business and digital media arts.

**Includes Touro College, Touro University, and New York Medical College*