



**STRESS & MS:
OUR CLINICIANS
EXPLAIN IT ALL**

ISSUE 17 | VOLUME 3 | FALL 2012

Healing MS



**MSRCNY PATH TO
PROGRESS GALA
OVER \$1.8 MILLION RAISED**



**THE KEY TO
DISCOVERING
THE CAUSE OF MS:
A SYMPOSIUM 2012
PRESENTATION**

**THE IMSMP NEWSLETTER
ADDRESSING THE NEEDS OF
OUR PATIENTS AND KEEPING
YOU INFORMED OF THE LATEST
RESEARCH TREATMENT AND WAYS TO HEAL**

The 15th Annual MSRCNY Patient Education Symposium Welcomed a Record-Breaking 800 Attendees

"I would like to thank everyone who attended the Symposium on Sunday, October 21, 2012. Your support and generosity that day was overwhelming." Dr. Saud A. Sadiq

On Sunday, October 21, 2012 approximately 800 patients, family members and caregivers attended the 15th Annual MSRCNY Symposium. The event opened with a slideshow of photographs of some of our patients, taken by Alden Reiss for a photojournalism project. This set the tone for a day of presentations representing the translation of laboratory research into the lives of our patients. In a new format, a researcher presented their work, followed by a clinician who discussed how they collaborated with that researcher. For example, Dr. Fozia Mir first talked about oxidative stress; Dr. Deneb Bates then spoke about how this work in our lab can be applied to a patient by suggesting a diet that reduces inflammation and oxidative stress. Patient profiles were presented, illustrating the synergy of work between the lab and the practice. Attendees were able to see firsthand the benefit of being part of a center where research is truly brought bench side to bedside. For a review of the research presented, turn to page 2. To view the patient slideshow go to: <http://www.imsmp.org/video/imsmp-patient-slideshow>



Pamela Levin welcomes attendees



Saud A. Sadiq, MD
Director

CLINICAL

Louellamae Adarfo, NA
Raheela Asifuddin, BS, R.T.
(N)(CT)(MR)(AART)
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Douglas Cohen, MD
Lisa Dabney, MD
Merry Davidson, RN
Beth DiBiase, LCSW
George DiGiacinto, MD
Tracey Eaton, RN, BSN
Joanne Festa, PhD
Alison Galiley, RN
Tamara Gilbert, RN, BS
Mary Gleason, RN, OCN
Ronald Hertz, MD
Allan Inglis, MD
Carole Johnson, RN, BS
Stephen Kanter, PT, DPT
Mary Klein, RN, CNS

Dorothy Kurdyla, RN
Yadira LaMazza, MSW
Marlon Lasa, RN, BSN
Rebecca Lizarraga, NP
James McKee, RN
Martha Nkansah, RN
Annie Park, BS, A.A.S
R.T. (R)(MR)
Gabriel Sara, MD
Evelyn Schroeder, RN, BSN
Rusudan Siriya-Gleyzer, BS,
R.T. (MR)(ARRT)(ARMRIT)
Julia Stanton, RN, BSN
James Stark, MD
Andrew Sylvester, MD
Jamie Weinstein, RN, BSN
Shelly White, LMSW
Armistead Williams, III, MD
Allan Zapanta

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Annabelle
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Violaine Harris, Ph.D.
Irene Jarchum, Ph.D.
Daniel Koffler, BA

Elaine Kwon, MS
Donald Lee, BA
Jerry Lin, BS
Xinhe Liu, M.Ed
Ying Liu, Ph.D.
Fozia Mir, Ph.D
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Boxun Xie, MS
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A Review of the Research from Symposium 2012

For those of you who were unable to attend this year's Symposium, here is a brief overview of our research presentations! We asked our presenters: What is the research you are working on? How will it help MS? What have you discovered in our lab so far?



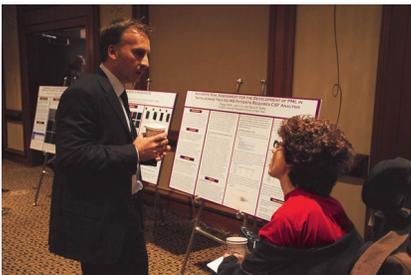
Deneb Bates, ND and Fozia Mir, Ph.D.

The Science Behind Naturopathy

Dr. Mir: I am investigating the role of oxidative stress and lipid peroxidation in MS. Oxidative stress is the damage caused by the accumulation of free radicals in a cell. Free radicals are a by-product of energy generation in our cells and are neutralized by our defenses – antioxidants. However, under conditions of oxidative stress, free radical production is increased and their accumulation leads to damage within the cell. The brain with its high content of fats/lipids is very vulnerable to damage by oxidative stress. Free radicals breakdown the fats in our brain, a process called lipid peroxidation. We are looking at lipid peroxidation products in the brain as a biomarker to measure oxidative stress and see if their levels increase with disease severity in the cerebrospinal fluid (CSF) of MS patients. We have discovered this to be true and that the levels vary from patient to patient emphasizing the need for personalized treatment.

Dr. Bates: The balance between oxidative stress and antioxidant protection contributes significantly to the health of our cells. The brain is especially susceptible to oxidative damage because of the high concentration of lipids. Naturopathic approaches can help both by decreasing the causes of oxidative stress and improving antioxidant status. Bioactive molecules from plants not only reduce the mechanisms behind oxidative damage but can also stimulate the production of our cell's own antioxidant pathways. Direct dietary antioxidants also help to fill in the gap between oxidative stress and antioxidant production to help protect our most vulnerable cells. Some of the best examples of neuroprotective foods include those with high Oxygen Radical Absorbance Capacity (ORAC) scores (spices, colorful fruits and vegetables), foods that can modulate the immune response to decrease oxidative stress (green tea, turmeric, parsley and celery), and foods that stimulate our own antioxidant pathways (broccoli, watercress, green tea, turmeric).

See Dr. Bates' article on green tea for more information on this particular neuroprotective beverage.



Massimiliano Cristofanilli, Ph.D.

The Science Behind Therapeutic Decision Making

Dr. Cristofanilli: My research focuses on developing a mouse model of progressive MS. Having an animal model for progressive MS will help explain mechanisms of disease progression. In addition, new lines of treatments could be safely tested in mice before clinical trials. Using biological material derived from progressive MS patients, we became the first in the world to reproduce progressive MS-like pathology in mice in our laboratory.

A Breakthrough in the Cause

Mr. Lin: We are currently investigating the cause or trigger of multiple sclerosis by trying to find the targets of oligoclonal bands (OCB's). OCB's are antibodies produced in the central nervous system. Using an experiment that we created, we may have identified a new target or key to the cause of MS. This target is currently under investigation and preliminary results show that a subset of MS patients have antibodies against it. Further testing is needed to confirm that this is a MS phenomenon. As we head into 2013, we are confident identifying the cause of multiple sclerosis is within our reach and we will search and find the lock this key belongs to.



Jerry Lin

Laboratory Research

Abstracts accepted at ISNI 2012

MSRCNY scientists attended the 11th Congress of the International Society of Neuroimmunology held November 4th-8th in Boston, MA. The following abstracts were accepted:

Andre Muller, Saud A. Sadiq: "Cerebrospinal fluid levels of the 'B-Cell Maturation Antigen' (BCMA, TNFSRF17) are increased in MS and correlate with B cells."

Violaine K. Harris, Kristi Clark, Saud A. Sadiq: "The role of Fetuin-A in neuroinflammatory responses in multiple sclerosis."



Clinical Research Review

Control Volunteers Needed!

MSRCNY is hard at work on several important research projects requiring donation of biological materials from non-MS patients (control subjects). In order to move forward, we need the help of our patients and their friends and family members.

Control Cerebrospinal Fluid (CSF) Collection:

The MSRCNY team investigating the cause of MS, headed by Jerry Lin and Dr. Sadiq, is analyzing samples of cerebrospinal fluid from MS patients and may be on the verge of a breakthrough in the search for the cause of MS. To continue their work, however, they will need to analyze cerebrospinal fluid from non-MS control subjects, with which the CSF of MS patients can be compared. Control CSF is hard to come by in general, and control CSF extracted freshly enough to allow important proteins to be analyzed prior to degradation is almost impossible to acquire at present. For friends and family of MS patients, a donation of cerebrospinal fluid may be the most important step to take to advance MS research. CSF samples will be obtained by a lumbar puncture (also known as a spinal tap) performed by an IMSMP neurologist. The main adverse effect associated with the procedure is a headache, which can be helped by lying flat and drinking caffeine. Lumbar punctures are routinely performed at the center; each IMSMP neurologist has performed the procedure a minimum of one thousand times, and when doing so uses needles significantly smaller than the default standard. Because of these factors, we believe that the risks associated with undergoing a lumbar puncture at our center are minimal. Persons with a past history of central nervous system infection, preexisting liver disease, immunodeficiency syndromes, history of thyroid disorders, heart problems, or preexisting blood disorders, as well as women who are pregnant or nursing, should not participate in this study.

Skin Biopsies for the Generation of MS-Specific Stem Cells/ Skin Biopsies for the Study of Dermatopathology in MS:

MSRCNY is continuing work on two studies involving the collection of skin biopsies. One is a collaborative effort with the New York Stem Cell Foundation to generate induced pluripotent stem cells (iPS) from adult skin cells in order to study the genetic underpinnings of MS as well as to establish a permanent bank of stem cells and fibroblasts for future research. The other is Dr. Williams's investigation of microscopic immune changes in the skin of patients with typical MS, atypical demyelinating disease (people with either MS or unexplained brain demyelination who have symptoms that suggest a systemic autoimmune disease), and healthy controls. The study aims to improve methods of differentiating MS from diseases that mimic it, and to determine whether MS is associated with microscopic immune changes in the skin. Healthy control subjects are needed for both studies. Participation involves the collection of a single skin biopsy and completion of a health questionnaire in the case of the NYSCF study, and two small skin biopsies and a blood draw in the case of Dr. Williams's study. Risks in both cases include formation of a scar smaller than a pencil eraser at the biopsy site, and a very small chance of infection. Any infection, while unlikely, would be treatable.

Stem Cell Trial Update:

All work on MSRCNY's proposed clinical trial of Autologous Mesenchymal Stem Cell-Derived Neural Progenitors as a potential treatment of MS has been put on hold pending the resolution of several regulatory concerns on the part of the Food and Drug Administration (FDA). MSRCNY is currently in full regulatory compliance with the FDA and wishes to continue to be in full compliance with the FDA on this and all other health matters. Any further updates to the status of the trial will be promptly reported at www.msrcny.org.

If you are interested in any of our clinical research studies and would like to learn more, please contact our Clinical Research Assistants Deirdre Dulak or Daniel Koffler at 646-557-3860 and 646-557-3852 respectively.

From the Lab



Irene Jarchum, Ph.D.

Spotlight on Dr. Irene Jarchum

Irene Jarchum, Ph.D, joined the center as a Research Associate and Principal Investigator in the laboratory in early fall of 2012. Dr. Jarchum received her BS in Molecular and Cell Biology from the University of Connecticut, and her MS and Ph.D. degrees in Biomedical Science from the Albert Einstein College of Medicine of Yeshiva University, where she studied autoreactive T cells in Type 1 diabetes. She comes to MSRCNY from the Memorial Sloan-Kettering Cancer Center where she became an expert in the subject of autoimmunity as a postdoctoral fellow. Her concentration is in the field of mucosal inflammation and infection, specifically the mechanisms by which the immune system fights *Clostridium difficile*, a bacterium that infects the intestine and causes colitis. Her initial work at the MSRCNY laboratory will be to analyze gastrointestinal pathogens and their potential role in the causation and progression of MS.

Comprehensive Care Column: Stress and MS



Alison Galiley, RN

This month's Comprehensive Care Column features Nurse Manager, Alison Galiley and Director of Social Work, Beth DiBiase, providing everything you need to know about:
STRESS AND MS



Beth DiBiase, LCSW

A little bit of stress can be a good thing. It motivates us to get out of bed in the morning, to do well at our jobs, and to push ourselves towards achieving our goals. This is considered positive or "eustress" which literally translates to good stress, a term coined by endocrinologist Hans Selye. Negative stress is the body's reaction to a situation that disrupts its equilibrium or balance. There are two major types of negative stress; acute and chronic. The way that these two types manifest in our bodies is distinctly different.

Acute stress is stress in response to an actual or perceived danger which induces the body's "fight or flight" response. Acute stress causes a release of hormones by the nervous system such as adrenalin and cortisol which prepare our body for a violent physical encounter or for fleeing the situation. This acute stress response is also triggered during events as simple as a traffic jam or a stressful day at work. And in less dramatic moments, the "fight" portion of the response may manifest itself as angry or argumentative behavior. The "flight" response may manifest as social withdrawal or substance abuse as a means of escape. Although this is a short term type of stress, it can become a repeating pattern for some individuals who create or live with chaos in their daily lives. This is called "episodic acute stress", and these individuals may seem to struggle with constant "drama" until a balance or equilibrium is somehow restored.

Chronic stress or prolonged stress develops in response to a negative situation that seems never-ending or inescapable. This may be an unhealthy relationship like a bad marriage, times of financial hardship, or illness. Both MS sufferers and their caregivers may experience chronic stress as they deal with the long term and sometimes debilitating nature of the disease. This type of stress can cause a variety of physical problems. It has been known to cause fatigue, headaches, stomach ulcers, and irritable bowel syndrome. It can also impact the immune system making a person more susceptible to illness, infection and even delay wound healing.

People have always speculated that there is a connection between the mind and the body, whereby psychological or emotional factors could impact physical wellness, and vice versa. People with MS often know intuitively the connection between their minds and their bodies. They may note that an argument with a family member triggers pins and needles in an arm. Or, they may have realized that when their walking is more difficult, they feel more depressed.

So, what can you do to manage stress?

- **Reduce any stress that is in your control.** There are obviously many factors in life that are outside of our control, so focus on those which you can control or on which you can have some effect. Delegate work that is too stressful, limit toxic relationships, downsize responsibilities that do not contribute to your life's satisfaction.
- **Learn your triggers,** those events, feelings or people that bring on stress and then figure out whether you can avoid them or work with them.
- **Learn relaxation techniques** that can be used to calm down in times of acute stress, like breathing exercises, as well as those that can be used regularly to make your entire lifestyle and way of coping less stressful, like yoga and mindfulness meditation.
- **Don't go it alone!** Structured support groups, as well as informal social networks are important in combating isolation, which increases feeling overwhelmed.

A trusting relationship with a psychotherapist who understands MS can help identify problem areas and can work, in a unique approach tailored to you, on increasing your emotional wellness and, in turn, your physical wellness. The social workers at the IMSMP collectively have decades of experience in MS and as psychotherapists. They welcome your calls and are available to help maximize your wellness.

"Here's our Take" by Dr. Armistead Williams



A recent paper published by Dr. David Mohr et al. in the journal *Neurology* (2012;79:412) showed that a stress management program reduced the number of enhancing (new and active) multiple sclerosis lesions. In the study, 121 patients with MS were randomized to receive stress management therapy or to be on no therapy for 24 weeks. The group receiving stress management therapy had fewer active enhancing lesions and fewer new T2 lesions.

Here's our take:

This is one of many studies that support our observations that chronic stress can affect MS. Other studies have linked stress to the level of MS disease activity. A different study from *Neurology* in 2010 showed that an 8 week course in Mindfulness Based Stress

Reduction improved people's fatigue, mood, and quality of life. Some of these benefits lasted for 6 months after the therapy. Is stress the cause of MS? No. Stress is one of many potential contributing factors to MS activity. All of the studies showing "factors affecting MS" can seem confusing. One overarching theme is pretty simple: Comprehensive MS care is about taking care of body, brain and spirit. **For more from Dr. Williams read The Doctor's Review on www.imsmp.org**

Can Talking About It Make Me Feel Better?



By Maxene Kupperman-Guiñals

Okay, so let's say that you have to get up at 7:00 each morning. You set your alarm for 6:58, you prepare yourself the night before by putting your clothes out, arranging your belongings, and placing your meds and breakfast items in a convenient place. You get into bed at 11pm and watch some nightly news. You read for a bit and drop off to sleep around midnight. Somewhere around 4 am, you get up to relieve yourself, read a little more, and then you drop back to sleep around 5.

When your alarm goes off, you roll over for another few minutes after silencing it...you find that you awaken again at 7:45 and you have to rush and don't have time for breakfast or time to get to the gas station (or the Metrocard machine) and suddenly the day is not as calm as you would like it to be.

You are stressed; your MS acts up, and you didn't have time to do all that you wanted to do. When most of your days are like this, you might decide to get help to change the behaviors. Some people feel that cognitive behavior therapy (CBT) would be a better way to go: You work on that behavior, and you fix it, assuming you want to do so.

I am of another mind. I wanted to know WHY I was doing what I was doing, and that takes more time. These behaviors replicated themselves in other areas of my life, and I wanted to explore the causes. It takes a very trusting relationship, on a much deeper level, to bare your soul with a therapist you work with over time. The stress fairy didn't arrive last night, as they say, and she isn't going away by tomorrow morning.

I called the Social Work Department at the IMSMP when I was diagnosed because, needless to say, I was bewildered and horrified and confused. My stress level and my blood pressure both rose. My social worker and I talked about dealing with the exigencies of this new condition. She helped me get a blue hangtag for my car, and because I live in Manhattan, I got a parking placard for NYC on-street parking. I got a special Metrocard, too, and learned how to apply for Social Security Disability. She helped me understand how the wording of the letter from my doctor to the appropriate City departments should not frighten me. My social worker is also a trained psychotherapist and has helped me understand how MS would have an impact on all areas of my life. Over time, my fears have lessened, and our discussions have branched out into different areas.

Unlike these basic needs that a social worker can help with, I also address more personal issues and become less fearful of where MS is taking me. I have begun to control these elements, and the fears that created tension and stress dissipated. So how does this have an impact on my MS? Any stress I have has an impact on how I deal with having MS: the way I walk, fatigue, how people perceive me, the level of ability I have to do things for myself.

Over here in my house, we always think: "What's the worst that can happen?" When I began to work with my therapist, it was only to address immediate needs. But after a while, the immediate needs opened up to issues more hidden, more subconscious. I could stop any time (and I have). But I always feel welcome to continue my exploration of how I respond to one of the most critical aspects of my life: my MS.

Social Work News



Are you about to get Medicare?

It is very important to talk to a social worker before you become eligible for Medicare, either because you have been collecting Social Security Disability, or because you are turning 65.

You have only 6 months from the time you enroll in Medicare Part B to buy certain coverage, so do not miss that window of opportunity! The social workers can help you figure out your best health care coverage option.

Call us at 212-265-8070 to make an appointment with a social worker. This is a service offered by the IMSMP at no added charge to you.

From the Front Desk

Starting January 1, 2013, any patients with calendar year policies will be responsible for deductibles and co-insurance associated with their plan.

Congratulations!

The IMSMP congratulates Sharmilee Roy from our front desk on the birth of a beautiful baby boy named Ihsan on November 2, 2012. Mama and baby are happy and healthy!

MRI Suite Reception

On Wednesday September 12, 2012 the MRI Suite held its official grand opening reception! Guests included executives from SIEMENS, Robert H. Stark, Jr., Vice President, JPMorgan Chase Bank, N.A., MSRCNY Board Members and MS Imaging staff. "We were thrilled to be a part of this endeavor and amazing facility." said Ioannis Panagiotelis, Ph.D, Vice President, Magnetic Resonance at SIEMENS. To schedule your next MRI, call 212-265-8070.





Therapy, Wellness & Communication



A Recipe for Success from your Physical Therapist, Dr. Stephen Kanter

Over the years, there are many patients with multiple sclerosis (MS) who have benefited from rehabilitation services including physical therapy, occupational therapy, and speech therapy. In addition, many patients with MS have found that wellness programs such as yoga, tai-chi, and personal fitness exercises have also been helpful. One variable is developing appropriate goals for the rehabilitation or wellness program. A second variable, which patients have reported to make a difference in the overall success of such a program, is whether the therapist or wellness professional understands how to work with people with MS.

Setting goals for a rehabilitation program *should* be straight forward, however many times the goals set are not appropriate or realistic. The reason for poor goal setting is usually due to the rehabilitation professional and the patient and family not discussing and prioritizing goals for a program. A second, and overly common, reason is the goals are set by the rehabilitation professional only based on what insurance companies “like to see.” An example of a poor goal is “to increase strength.” That is not to say getting stronger is not important, but a goal should be put into functional terms which would reflect what task/activity would be improved by this “increased strength.” An example of a good goal would be “to be able to get off the floor independently” or “to be able to get in and out of the shower independently.”

Rehabilitation professionals may suggest setting up short term goals to work toward the long term goal. For example, the long term goal may be “walking 100 feet without an assistive device,” but the short term one could be “walking 200 feet with a cane.” When it comes to a wellness or fitness program, goal setting is even more important. The wellness professional should understand what functions and tasks you want to improve, not only that you want to get stronger or have “more energy.” Remember, regardless of whether it is a licensed rehabilitation professional, such as a PT, OT, or ST, or if it’s a wellness professional, by agreeing on a goal – such as walking across central park - the professional working with you should work on multiple areas (such as strengthening, balance, flexibility and endurance) to reach this goal.

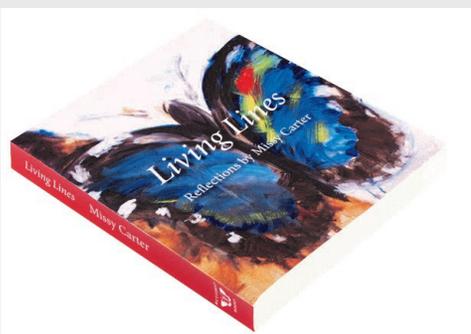
In regards to finding a “Multiple Sclerosis Rehabilitation Specialist,” the fact is, there are few in the New York metropolitan area. Aside from Dr. Stephen Kanter, the Supervisor of Rehabilitation Services at the IMSMP, there are fewer than ten other therapists whose patient load is greater than 50% patients with MS. One way to find a rehabilitation specialist who focuses on MS is to find a therapist who is a member of the International Organization of Multiple Sclerosis Rehabilitation Therapists (this information can be found at <http://iomsrt.ms-care.com>). Another way is to look for therapists who have earned the MSCS (Multiple Sclerosis Certified Specialist) credential. These letters would be found after their primary credential (such as PT, OT, or SLP).

Patients with MS should know there are many neurologic physical therapists, who can provide quality services. Another credential to look for would be the NCS (Neurologic Certified Specialist). For some patients, it may be worthwhile to look for rehabilitation professionals who specialize in treatment of symptoms related to MS. There are a select group of physical therapists who specialize in vestibular/dizziness treatments and others pelvic floor/incontinence treatments. There are occupational therapists who specialize in vision and perception disorders, cognitive rehabilitation, and even driver’s re-education. As for speech pathologists, there are a few who specialize in treatment of cognition deficits.

It is a little more complicated to find a wellness professional such as a personal trainer or yoga instructor who truly understands how to develop a program for a person with MS. In many cases, whether it’s a wellness professional or a rehabilitation professional, the most important consideration is their ability to collaborate with the patient, their family, and the staff at the IMSMP. For patients of the IMSMP, Dr. Kanter is willing to provide consultation with any rehabilitation or wellness professional in developing and implementing a program which would meet your needs to increase independence in function and safety in movement.

If you have any questions or concerns regarding setting appropriate goals and methods to reach these goals, please make an appointment to see Dr. Kanter.

Staff Book Recommendation:



Living Lines Reflections by Missy Carter

Living Lines asks the reader three core questions and offers perspectives, focused on perennial themes—the meaning of life, setting priorities, coping with challenges, strengthening relationships, connections between body and mind, and spirituality. *Living Lines* is a book for personal discovery and can be used as a tool for self- and-life assessment, or it can be opened for a surprise insight . It encourages the reader to live more fully and provides a reference to be revisited in that ongoing process. For 25 years, Missy Carter, friend of the IMSMP and MSRCNY, has been a career counselor, specializing in transitions, work and family issues, stress management, and wellness. This is an ideal gift for loved ones and the tumultuous, challenging times we are living in. For more information about the book, go to: butterfly-books.net.

IMSMP/MSRCNY and staff photographs
courtesy of Edward Brydon, PhD.

Newsletter Editors:
Pamela Levin, RN, Umar Sadiq



News on Naturopathy

Green Tea: A Rich Source of Brain Protecting Antioxidants and Immunomodulators

Drinking green tea imparts many health benefits, ranging from improving heart health to reducing the risk of cancer. Emerging research suggests that green tea might also offer significant benefits for people with neurodegenerative diseases, such as multiple sclerosis (MS), when utilized as part of an appropriate integrative medical management plan. Green tea contains several bioactive molecules (phytonutrients) including those with powerful antioxidant properties, such as EGCG, as well as those with immunomodulatory and neuro-protective actions. These antioxidants and other phytonutrients are responsible for the general health benefits of green tea and may have particular importance for people with MS

Phytonutrients from green tea are antioxidants that protect the brain from oxidative damage. Several mechanisms are responsible for these beneficial effects.

They include reducing heavy metal burden (one cause of oxidative stress), and stimulating the Nrf2 antioxidant pathway (the same pathway as the experimental MS medication known as BG12, which is likely to be approved by the FDA early next year).

Phytonutrients from green tea are also immunomodulatory and neuroprotective. One key study performed using the animal model of MS (which is called EAE), showed that administering EGCG lowers levels of harmful inflammation in the brain and prevents demyelination—the characteristic type of damage that occurs in the brains of people with MS. Specifically, EGCG calms the immune system, which is hyperactivated in MS. It inhibits the production of certain types of white blood cells (Th1 and Th17) that aggravate MS and enhances the production of those that are protective (Treg). Another animal study examined the neuroprotective effects of

combining green tea extract with Copaxone, one of the disease modifying medications available for treating MS. This study demonstrated that combination therapy provides superior protection compared to Copaxone alone.

To reap the health benefits that green tea offers, many experts recommend consuming at least 2-3 cups per day. While green tea has been used safely for generations, anyone with a chronic illness or taking medications should check with their doctor before consuming medicinal quantities. A cup of green tea contains about 1/3 the caffeine found in a cup of coffee.

For individualized dietary and supplement strategies to help with oxidative stress, immunomodulation and neuroprotection, schedule a visit to see Dr. Deneb Bates, the IMSMP's Naturopathic Doctor.

The Beneficial Effect of Exercise on Cognitive Functioning

“What can I do to improve my memory?” This is a common question people ask, particularly as they age. In addition to seeking ways to maintain and improve physical functioning, people often look for ways to maintain and improve cognitive functioning. People with multiple sclerosis are equally interested in preserving cognitive functioning.

Emerging research is demonstrating that aerobic exercise, such as walking briskly for 30 minutes, can produce the brain boost that many people are currently seeking. You may ask why people have begun to focus on maintaining or even improving their cognitive functioning. Perhaps because adults are living and working longer than in past decades and there are ever increasing demands on our attention from various technologies requiring sharp cognitive skills and rapid adaptation. Moreover, the effects of aging begin earlier than most would think. Studies show that at approximately 30 years of age, cognitive functioning begins to decline.



Preserving cognitive functioning may be of particular interest to people with multiple sclerosis. Studies have consistently shown that mild cognitive dysfunction is common in individuals with multiple sclerosis, occurring in 43%-65% of patients. There are currently no medications approved to treat cognitive dysfunction in MS, although medicines targeting specific symptoms, such as inattention, have been effective. Cognitive dysfunction is not only distressing in itself, but it also affects mood, quality of life, and activities of daily living such as employment. Studies of normal aging and of patients with multiple sclerosis are demonstrating that exercise can have a positive effect on cognitive functioning.

Our winter newsletter will feature this full article in the Comprehensive Care Column by Dr. Joanne Festa, Director of Neuropsychology and Dr. Stephen Kanter, Supervisor of Rehab Services

MSRCNY Development Department News

Patient Letter Writing Campaigns Help Support the Center

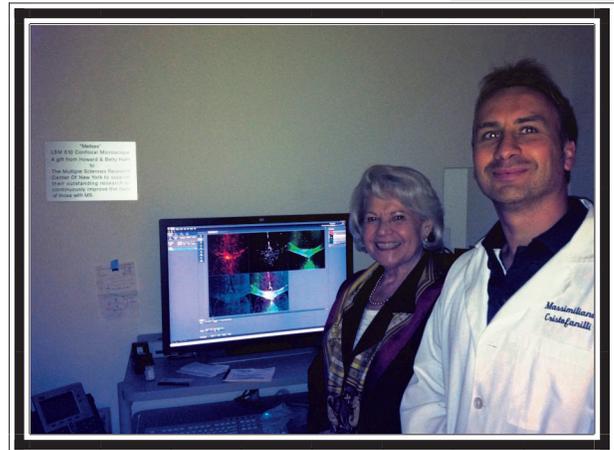
Remarkable, rapid advances in MS research have been made this year in our laboratory. But as an independent research center, every year we must raise \$6 million to keep it going at a steady pace. This includes paying 26 staff members, maintaining the instruments and machines in our state-of-the-art laboratory, and purchasing new equipment needed to conduct the many unique experiments we have underway to understand the disease, in addition to general operations. We rely on the continued generosity of grateful patients and their friends and family members to help support us every year.

MSRCNY is inspired by the thoughtfulness of patients and their relatives and friends who take on their own letter writing or electronic fundraising campaigns. This involves reaching out to their contacts, explaining the patient's personal journey with MS and the Center and appealing for support of MSRCNY's research that is so important and relevant to his/her treatment. Over the past three months alone, over \$43,000 has been raised for the Center using this effective fundraising method to fund the laboratory's work in understanding MS and developing effective treatments for the disease.

The Development Department is available to provide support and resources to help you in your campaign.

Contact Kimberly Woodward, Development Manager,
at 646-557-3863 or kwoodward@msrcny.org for more information.

Confocal Microscope *Melissa*, is Paid a Visit by its Donor.



Betty Halff, the generous donor of *Melissa*, the confocal microscope that is a critical tool in MS research, paid the laboratory a visit in September from San Antonio, Texas. Here she is with Principal Investigator Massimiliano Cristofanilli, Ph.D. in the confocal room with *Melissa* in the background.

KUDOS to David Greenstein!

Board member David Greenstein completed his second New York Marathon on November 4th.

Although the race was officially cancelled due to Hurricane Sandy, he and thousands of others decided to come together and participate in the "Run Anyway Marathon" on that beautiful sunny day.

Congratulations, David!



MSRCNY recognizes its generous donors who make life-changing research possible.

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** This list includes donors of \$1,000 or more between August 1, 2012 and November 30, 2012, with the exception of Path to Progress 2012 donors.*

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MSRCNY receives workplace giving funds from the United Way of New York and Bergen County, New Jersey. Inquire with your employer to participate.

2012 Path to Progress Benefit a Smashing Success



Board member Phil Weisberg bidding to raise money for MS research



James Mariani with wife and Board member Bernadette Mariani



Turner Hopkins, Emily Newman, Ryan Foley, Michael Rafferty, Noel Charbonneau, Kim Foley, Kathryn Rafferty, Noel Foley

More than \$1.8 million was raised in support of the Center's research at its annual fundraiser on October 17th at The Pierre. Because expenses were low and the event was underwritten by generous Board members earlier in the year, the Path to Progress Benefit netted over \$1.7 million, and every penny of it went directly to fund the laboratory's activities.

The event would not have been possible without the tireless commitment of MSRCNY Board member Bernadette Mariani and her husband James, who, throughout the year, lent a great amount of support to Event Chair Dr. Saud Sadiq to execute a perfect event. From negotiating low rates and pro bono services with vendors, to donating wonderful auction items, to serving spectacular Banfi wine at the dinner tables, the Marianis went above and beyond what was called for. Their hard work certainly paid off!

Emcee Lara Spencer, Lifestyle Editor of *Good Morning America*, set a warm and elegant tone to the evening by graciously acknowledging the generosity of the Board, committee members, and sponsors and reminding the guests of how critical the Center's

research is to the field of MS and neurological sciences in general. David Goodman executed a very successful auction that raised \$310,000 for research and \$347,000 for the stem cell study when it moves forward. An excellent comedy routine presented by David Brenner concluded the evening's program. Up-and-coming piano player and vocalist Eric Hayes performed blues, jazz and rock tunes for the cocktail and dessert receptions to keep everyone in a good mood throughout the evening.

Dr. Sadiq deeply thanks the members of MSRCNY's Board, the Benefit committee, and every single person who participated in the event by attending, raising his or her paddle, sending a contribution, donating a service or an item for the auction or goody bag, and helping to save costs. The outstanding generosity from the MSRCNY community is encouraging and the researchers and staff are very grateful for it.

Proceeds from the Gala will have a tremendous impact on our research's path to progress in finding the cause of MS and developing effective treatments for patients.



Neil Mellen, Board member David Greenstein, Hillary Mandel, Diane Mellen



Gene Seidler and Howard Goldberg



Alexa Rice, Paul Broder, Kim Griffith Broder



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Path to Progress Benefit

A Special Thanks to our 2012 Path to Progress Gala Supporters

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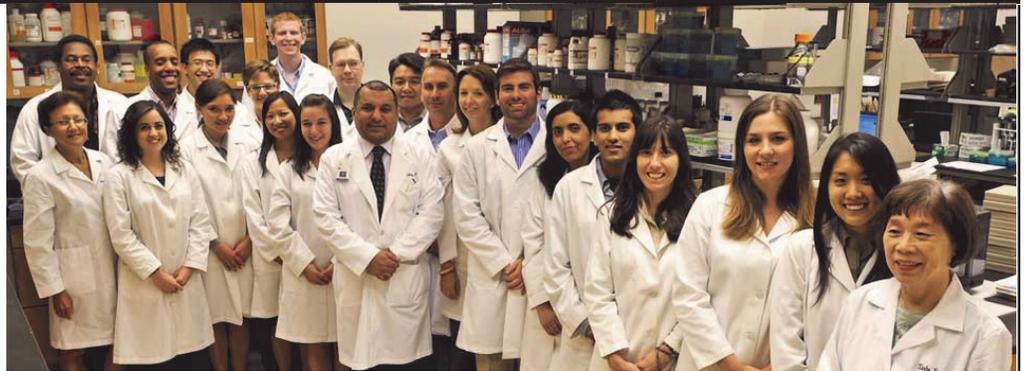
A memorial donation or gift in honor of someone special, in any amount, is a meaningful way to support MSRCNY's mission. You can acknowledge a special occasion or commemorate a life event through this way of giving.

Wall of Hope

For \$2,500, \$5,000 or \$10,000, you can add a plaque inscribed with your personalized message to the beautifully designed Wall of Hope, centrally located at our facility and visible to over 11,000 patients and visitors who come to the Center on an annual basis.

Planned Gifts

You can help play an important ongoing role in sustaining MSRCNY. Planned giving can benefit you, your loved ones, and MSRCNY's mission. Planned gifts enable charitable donations at a level that you might not have thought possible, while maximizing tax benefits for you and your family.



Contribution Cards

For \$50, you may purchase five contribution cards, blank greeting cards that can be personalized while indicating your contribution and support of MS research.

Employee Matching Gifts

Many employers will match your personal donation. Check with your company to find out if they have a matching gift program so you can double or triple the impact of your gift.

Gifts of Stock

Making stock gifts can be a tax-advantaged way to support MSRCNY. Your broker can assist you in making a direct transfer of stock to MSRCNY as a charitable gift.

Shop for MS

Shop away at the following websites: igive.com, givebackamerica.org, and goodshop.com. Enter Multiple Sclerosis Research Center of New York as your charity/cause.

Sell for MS

The eBay Giving Works program allows sellers to designate proceeds from their eBay sales to MSRCNY. For details, visit missionfish.org.

Please contact Sophie Deprez, Director of Development

**(646-557-3861 or sdeprez@msrcny.org)
for more information on any of the above opportunities!**

The Multiple Sclerosis Research Center of New York is dedicated to finding the cause of and cure for multiple sclerosis. MSRCNY focuses on translational research, bringing findings quickly from the laboratory into clinical application to treat symptoms of MS and to halt or reverse damage caused by the disease. The current groundbreaking research initiatives underway hold great promise, but come at a substantial cost. MSRCNY's lean business model allows for the money raised through generous donations to go directly to research, not overhead. Your tax-deductible contribution will make a difference in the lives of MS patients and advance our understanding about the disease by helping us to continue developing effective therapies and finding a cure for the disease. *Thank you.*



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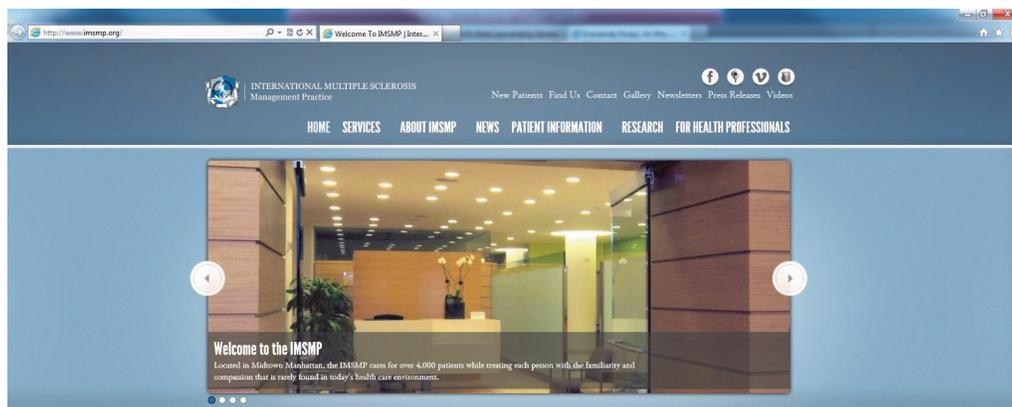
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