



Healing MS

The IMSMP newsletter to address the needs of our patients and keep you informed of the latest research treatments and ways to heal

Tisch MS Research Center of New York Commences Highly Anticipated Phase II Stem Cell Trial

In October 2018, the first patient recruited for the stem cell trial received their first cycle of treatment and our long-awaited Phase II trial began. Funding by grants from Biogen and the National Multiple Sclerosis Society enabled the study to be initiated. Despite these grants, we still need just over \$3 million to ensure completion of the planned 3-year study in a timely manner.

The 50-patient study will include ambulatory patients with established disability who have had disease symptoms of MS for less than 15 years. It is designed to establish efficacy of neural progenitor cells derived from mesenchymal stromal cells aspirated from the patient's own bone marrow. This cross-over study is randomized, double-blinded and approved by the Institutional Review Board (IRB) and the FDA under an (Investigational New Drug Application) IND. It is monitored for safety by an independent data safety monitoring board. Each patient in the study will receive neural progenitors or a placebo injected intrathecally (into the cerebrospinal fluid surrounding the spinal cord) for a total of six doses administered every two months for the first year. The second year will be identical except the patients who received placebo will get neural progenitors and vice versa. A third year is designed for adequate post-treatment follow up. All cell culture manufacturing and treatments will be performed in the newly constructed \$5 million Regenerative Medicine Laboratory at the Tisch MS Research Center of New York.

A team of over 20 researchers and clinicians lead by Drs. Sadiq and Harris will be responsible for all aspects of the trial. The Phase II trial is based on years of basic laboratory research which started in 2001 at our Center. That work resulted in a Phase I study completed in 2017 establishing safety and tolerability of our approach.

It is hoped that this innovative study will show that established disability may be reversed or repaired in patients with secondary progressive and primary progressive MS.



**Bhaumik Shukla in the
Regenerative Medicine Laboratory**



**Dr. Saud A. Sadiq prepares an intrathecal
injection during a stem cell treatment**



**Members of Tisch MSRCNY's
Stem Cell Team**

INSIDE THIS ISSUE

- Tisch MSRCNY researchers present their work in San Diego
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TISCH MS LABORATORY RESEARCH

Tisch MSRCNY Presented Research Abstracts at the Society for Neuroscience

On November 3-7, 2018, Drs. Saud A. Sadiq, Jamie Wong, Anna Iacoangeli, and Research Assistants Gillian Carling and Natalie Favret from the Tisch MSRCNY Lab attended the Society for Neuroscience (SfN) Annual Meeting in San Diego, California, where they presented four research posters. Here are the abstracts:

Effects of Multiple Sclerosis Donor-Derived Mesenchymal Stem Cell-Neural Progenitors (MSC-NP) on Glial Cells

Gillian Carling, Shayna Zanker, Saud A. Sadiq, MD, and Violaine Harris, PhD

Mesenchymal stem cell-derived neural progenitors (MSC-NPs) are currently being investigated as a cellular therapy aimed at promoting repair and regeneration in patients with progressive multiple sclerosis (MS). Dr. Harris and her team have been investigating the effects of factors released by the MSC-NPs on microglia and astrocytes, which are cell types that play a role in the progression of MS. The results obtained thus far suggest that MSC-NPs promote a beneficial shift in the activation of these cells.

Primary Progressive MS Cerebrospinal Fluid Delays Remyelination After Lysolecithin-Induced Demyelination

Serena Shimshak, Nathan Kung, Jamie Wong, PhD, and Saud A. Sadiq, MD

Unlike relapsing remitting MS (RRMS) where some repair of lesions (remyelination) can occur during periods of remission, in primary progressive MS (PPMS), the progressive decline in neurological function is associated with a failure in remyelination. In this study, Dr. Wong's group investigated whether toxic factors present in cerebrospinal fluid (CSF) from PPMS patients can impact remyelination in a mouse model of focal demyelination (lysolecithin model). Mice that were injected with PPMS CSF had greater motor deficits and larger lesions than mice injected with RRMS CSF. These results suggest that PPMS CSF contains toxic factors that can impair the ability of the spinal cord to repair damage.

Novel Molecular Marker DJ-1 Indicates Role in Cognitive Dysfunction in Multiple Sclerosis

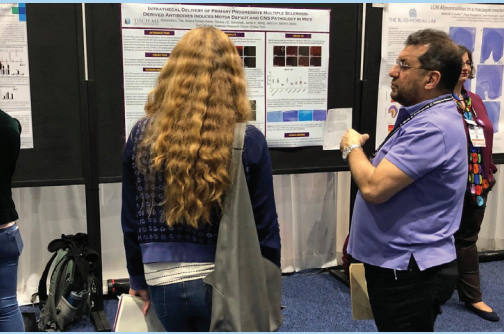
Natalie Favret, Anna Iacoangeli, PhD, and Saud A. Sadiq, MD

Mitochondria are tiny cell organelles that generate energy through respiration. DJ-1 is a key protein associated with mitochondria and mitochondrial dysfunctions; it promotes neuroprotection by translocating to the mitochondrial membrane upon oxidative stress. DJ-1 has been linked to severe cognitive dysfunction (SCD). We quantified levels of DJ-1 in CSF samples of (1) subjects with no MS, (2) MS patients without cognitive dysfunction, and (3) MS patients with SCD. Our results revealed that, compared to the unaffected control group, the levels of DJ-1 were significantly reduced in CSF samples of MS patients with cognitive dysfunction. Moreover, in experiments with hippocampal neurons in cultures treated with CSF from MS patients with SCD, we observed that DJ-1 localized to the outer membrane of mitochondria upon these stress-inducing treatments. In conclusion, these results identified DJ-1 as a promising molecular marker of cognitive dysfunction in MS patients.

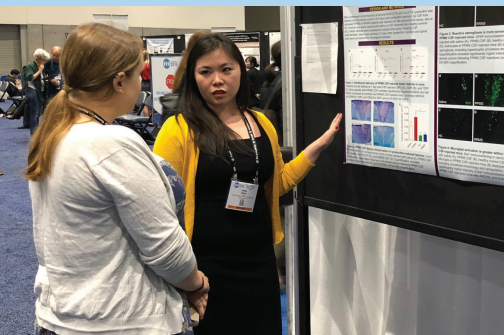
Intrathecal Delivery of Primary Progressive Multiple Sclerosis-Derived Antibodies Induces Motor Deficits and CNS Pathology in Mice

Alexandra Tse, Antara Finney-Stable, Serena Shimshak, Jamie Wong, PhD, Jerry Lin, and Saud A. Sadiq, MD

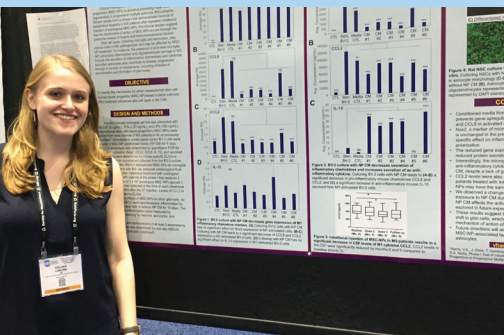
B-cells, the antibody-secreting cells of the immune system, likely play an important role in multiple sclerosis (MS) due to the presence of oligoclonal bands in MS patient cerebrospinal fluid (CSF) and the effectiveness of anti-B-cell therapies such as Rituxan™ and Ocrevus™ in disease treatment. We investigated the effects of injecting specific antibodies derived from MS patient CSF into mice spinal cords. We observed significant behavioral deficits, as well as evidence of activated astrocytes and microglia in mice injected with primary progressive MS (PPMS) derived antibodies, as compared to those injected with saline and antibodies from healthy patients and relapsing remitting MS (RRMS) patients. Our results suggest that PPMS derived antibodies likely play a role in contributing to these observed motor deficits and CNS pathology. By focusing our studies directly on antibodies, we can draw more meaningful connections between the individual components of MS patient CSF and our observed behavioral and pathological changes.



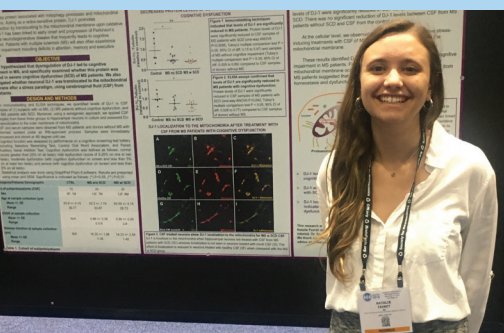
Dr. Saud A. Sadiq presents a research abstract at SfN



Dr. Jamie Wong explains her research



Research Assistant Gillian Carling with her abstract poster



Research Assistant Natalie Favret with her abstract poster

TISCH MSRCNY NEWS

A New Fellow, A Familiar Face - Aaron Zigelbaum, MD



Aaron Zigelbaum, MD

The Tisch MS Research Center of New York would like to welcome back our former research assistant (RA), Aaron Zigelbaum. Aaron returns to Tisch MSRCNY as Dr. Zigelbaum to fulfill a 2-year fellowship in multiple sclerosis under the guidance of Dr. Saud A. Sadiq. A fellowship is the period of medical training a physician may undertake after completing their residency. During this time, the physician is known as a fellow. A fellowship focuses on the professional development of the physician and provides the opportunity to explore a particular field of medicine or research.

In 2010, Aaron completed his 2-year rotation as a research assistant in the Tisch MS Research Center Laboratory. In the following interview, he shares with us what he has done since then and how his journey has led him back:

Q: Most RAs at the Tisch MS Research Center gain experience in bench research prior to applying to medical school. Was that the path you took as well?

I supposed I may have been in a slightly different position as I had intentions to pursue medical training by the time I began working as an RA. I was certainly cutting my teeth on western blots, fluorescent microscopy, histopathology, and cell culture while in the midst of applications to medical school. At the time I'd never lived abroad, and so when the opportunity came to travel across the ocean to train at University College Dublin, I jumped at

the chance. I lived in Ireland for four years and completed medical training there under the UK system in 2014. I then returned to the States for an intense four-year residency at the high-volume, neuro-dedicated hospital at Barrow Neurological Institute in Phoenix, Arizona, which I completed this summer. I aim to continue to be involved in research in addition to clinical practice, and the Tisch MS Research Center provides a unique chance to do so.

Q: How did your experience as a research assistant at Tisch MSRCNY help during medical school?

I had the great opportunity to shadow Dr. Sadiq and Dr. Williams during my time as an RA, so this provided my first insight into clinical practice prior to commencing formal medical training. Throughout medical education, you learn how incredibly varied the practice of medicine is between individuals and centers (let alone between continents). The diligence to detail and commitment to excellence in one's work that is instilled at the Center certainly helped me to adapt to the rigors of medical school and residency.

Q: A fellowship in multiple sclerosis is a commitment to learning as much as possible about this chronic disease. What made you decide this was right for you?

As I progressed through residency, I started to develop an idea of the type of clinical practice that would be right for me. By my third year, I knew I preferred working in an outpatient setting as opposed to life in the hospital. My time spent as an RA informed an interest in MS that persisted through training. I devoted much of my elective time to rotations in the neuroimmunology department at Barrow. I gave a Grand Rounds presentation during my residency on the use of stem cells in the treatment of MS. At that time, I began to review the Phase I trial performed here and learned more about the research happening. The amount of progress made in MS over the past 20-30 years has arguably been the most profound for any chronic neurologic

condition during this same recent time period, and the degree of success that can be achieved with available treatments is something I find very fulfilling. At the same time, there is still much to be uncovered about the disease, particularly with regards to pathophysiology, so it is exciting to have the opportunity to take part in further understanding this condition. Additionally, multiple sclerosis is widely variable in its presentation and can affect organ systems outside of the CNS. I enjoy the challenge that comes with tackling the multitude of symptoms that can occur, and how it demands a comprehensive view of medicine to treat correctly. There's a momentum in healthcare to sub-specialize ad infinitum, and while this is important because of the vast and ever-evolving knowledge base of modern medicine, it can sometimes veer us towards having a degree of tunnel-vision with regards to clinical practice. I like how every case poses its own unique challenges, and demands care tailored to each individual which often extends beyond just the realm of neurology.

Q: How does it feel to be back?

The atmosphere at the Center is exactly as I recall as an RA. The commitment and energy of all the staff here is palpable, and I noticed it again the moment I reentered the door for interviews. It's been great to meet new people as well as reconnect with those I worked with several years ago. This place is truly unique and has certainly lent an adjustment from the manic life of a resident at a tertiary care hospital (I haven't been asked to be in three places at once yet!). Dr. Sadiq is allowing me the opportunity to rotate through every aspect of the clinic, and to work with and get to know all the fantastic people that make this place special. In time, I look forward to hopefully meeting many of you reading this newsletter, as well as to contributing my own part to the growth of the Center and living up to its exceptional standards.

21st ANNUAL TISCH MS RESEARCH CENTER PATIENT SYMPOSIUM

Thank You For Attending!



Tisch MSRCNY and the IMSMP would like to thank everyone who attended the Tisch MS Research Center of New York's 21st Annual Patient Education Symposium. This year, almost 600 guests filled the grand ballroom of the New York Hilton Midtown. The presentations focused on symptom management, physical therapy devices and smart technology, and the history of treating MS along with new ways to manage progressive disease. This year's event also featured guest speaker, Dr. Cristina Dorazio, who discussed the importance of mindfulness for people with multiple sclerosis. She also shared a few simple breathing techniques with our guests.

Our patient profile, Nancy Boblett, shared her journey on being diagnosed with progressive MS as she was about to embark on her Doctorate Degree for Applied Linguistics. Her story was truly an example of "Being in Harmony," which was the subject of opening remarks made by Dr. Saud A. Sadiq. His presentation set the tone for the day and sent a message everyone could relate to – happiness is within our own power.

Later in the day, Dr. Sadiq addressed new research happening in the Tisch MSRCNY Lab and illustrated the advancements we are making in understanding progressive disease.

In response to the multiple requests for the information that was presented, we have posted the majority of the PowerPoint slides on www.tischms.org. They may also be found on our Facebook page at www.facebook.com/TischMSRCNY/

We would like to thank all of those who took a moment to complete our survey and offered feedback on ways to improve upon next year's event. Plans are already in the works. We hope to see you there on **Sunday, November 10th, 2019!**



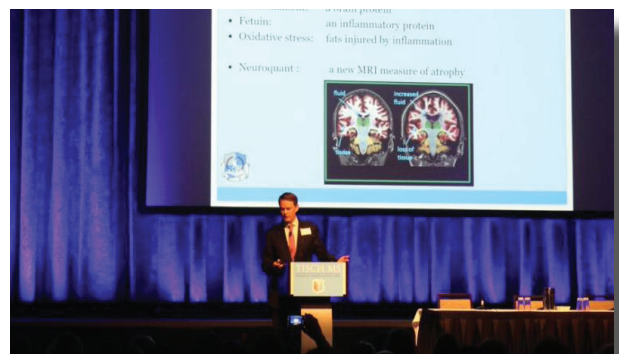
Nancy Boblett (L) joins Whitney Mallis, RN and Dr. Stephen Kanter for the patient profile



Dr. Saud A. Sadiq gives an update on the work happening in the Tisch MSRCNY Laboratory



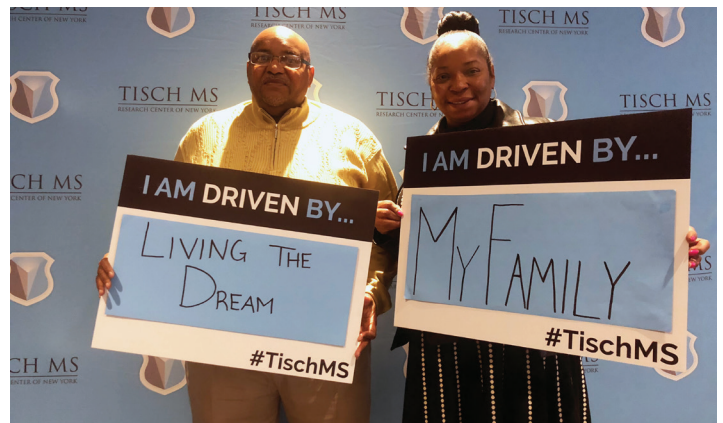
Dr. James Stark discusses pharmacological treatments over time



Dr. Armistead Williams discusses treatment of progressive disease

21st ANNUAL TISCH MS RESEARCH CENTER PATIENT SYMPOSIUM

What Drives You?



A yellow sticky note is pinned to a blue background with a red pushpin. On the sticky note, there is a red circular stamp with the words "SAVE THE DATE" in a bold, sans-serif font.

22nd Annual Tisch MS Research Center Patient Symposium
Sunday, November 10, 2019
 New York Hilton Midtown

SOCIAL WORK NEWS

Making Meaning in Your Life with an MS Diagnosis



Scott Masciello with his family

After 12 years, it would be an understatement to say it's been a long road with MS. It would be an even greater understatement to say I've never been in a better and happier place since my diagnosis. A few years ago, as I started to get worse, so did my motivation. I was letting MS adjust and control my life, instead of figuring out how to adjust my life around the MS. As a consequence of that, I became a negative person. I thought I was fine, just trucking along, but according to everyone else, and I mean EVERYONE else, I had become quite a miserable person to be around. Looking back now, I can see their point of view, and only now, after fighting through that period, can I truly appreciate their support, and see what a different quality of life I can have.

"What do I do? Why should I change? How do I change?" I guess these are all questions we are searching the web for, reading every article, contemplating every far-off idea, and hoping one of those will be the magic bullet. As we are so often told, nothing works for everyone, everyone's MS is different.

For me, it started with learning that, even with MS, you can (and should!) push yourself to new limits. For a long time, I was doing yoga 3-4 days a week at home, by myself, with no real repercussion for missing a workout or even slacking off during it. It was in private, and just doing it felt like a reasonable enough accomplishment.

My wife asked if I had thought about getting back into the gym. I had been an athlete my entire life until I got sick, and it had been a long time since I had more of an aggressive workout, such as weightlifting. I thought due to my need for canes and trouble with my legs, it would be too much of an inconvenience and I came up with every excuse not to enter that world. I finally caved and joined a small, quiet gym near my office. It was often empty, and I could do my workouts without much judgment (or risk for my ego to start creeping in). I was approached by a personal trainer, Damarius with Pro Plus Fitness - and I committed myself to a monthly training membership. My wife and I knew that because it carried a reasonable price tag, I better kick into gear and get my money's worth! I have since maintained a five day per week training schedule. Damarius reached out to IMSMP physical therapist, Dr. Stephen Kanter at the start, to design a program customized to my limitations while still achieving my goals. We set some milestone goals in the beginning, and I have been reaching those goals on or before we thought we would. One of the first eye-opening experiences happened pretty early. I hadn't been on a bike in many years (10 or so) due to balance issues and not being able to complete a full rotation of the pedal (even exercise bikes were out). Early on, Damarius told me he would have me riding a bike and doing pull-ups. I thought he was crazy. Well crazy he was, in a different way. During one of our first sessions, he strapped me into a bike and we were just going to work at it. It was one of the most difficult things I had ever done, retraining your muscles and joints for a specific motion. After a few minutes and some assisted rotations, I was able to complete one myself, it wasn't pretty but it was one, then two, then multiple rough rotations. Slowly, over a few minutes, it became easier and easier, like adding oil to a squeaky wheel. Now, I have been able to add stationary biking to my workouts every day.

Recently, I was able to complete my first pull-up in 12 years, and have since added that to my program, aiming to start at just one and increase my number as we go.

Another change was gluten. I tried the Whole30 diet in January of this year, and my wife observed that I seemed like a different person. About four months after kicking gluten, even I could see the amazing results. Not only in weight loss, but in overall attitude. Many people commented, saying they hadn't seen me this happy in a long time. I was like a new person (who didn't realize how terrible they were before). Even my kids said I was happier and they knew that if I ate gluten they didn't want to be around me, dubbing me with the name 'Grumpy Gluten.' I am not saying this will work for everyone else, but after seeing Dr. Bates back in July, even she noticed the difference in me and had observed many people that remove gluten from their diet see a substantial improvement in many areas of life.

I am now able to be more involved in my kids' lives with sports and activities. I don't bail on plans as often, or even ever. I find myself wanting to do more and not wanting to just stay home as much. My life has really turned around. In the past, I always said I was doing what I could to not let MS bring me down, and while at the time I did truly feel that way, I now know I was just fooling myself. I can't beat this disease, I can only figure out how to not let it beat me. Discovering how to do the most with what I have has really changed my life.

NEWS ON NATUROPATHY

Olive Oil Shows Multiple Pathways of Protection in an Animal Model of MS

A growing body of evidence suggests that the Mediterranean diet has neuroprotective properties, and may be beneficial for people with MS, in part due to its benefits for vascular function. The Mediterranean diet includes an abundance of vegetables, fruits, nuts, beans, whole grains, oily fish and olive oil.

Olive oil, called “liquid gold” by Homer and “the great healer” by Hippocrates, has health benefits beyond simply replacing worse fats in the diet (like trans-fats, saturated fats, or low-quality vegetable oils). Olive oil contains special molecules called polyphenols, and a high concentration of monounsaturated fatty acids (MUFAs), which have known antioxidant, anti-inflammatory, and neuroprotective properties. However, the anti-inflammatory and antioxidant properties of olive oil had never been studied in a model of MS until recently. A paper published in the journal, *Nutritional Neuroscience* looked at “The Protective Effect of Extra-Virgin Olive Oil in the Experimental Model of Multiple Sclerosis in the Rat.” The group of scientists showed, in the animal model of MS, that extra-virgin olive oil has multiple mechanisms of action that may reduce some of the hallmarks of the disease. Consuming olive oil reduced markers of inflammation and oxidative stress in the brain, and increased antioxidant enzymes. Olive oil consumption also reduced lipopolysaccharide, a marker of bacterial toxicity due to intestinal permeability, as measured in the brains and spinal cords of the animals.

A small animal study can't provide definite

conclusions about the benefits of olive oil for people with MS. However, olive oil is already known to have many health benefits, and the Mediterranean diet is considered one of the healthiest, so there's no reason to wait to include olive oil abundantly in your diet.

A Few Tips:

When cooking, never allow olive oil to smoke—it will lose its health benefits. Olive oil is healthiest when eaten raw or when cooking with mild to moderate heat, as high heat can damage the delicate fats. Olive oil can be mild in flavor, but sometimes has a bitter-spicy kick to it that comes from the polyphenol molecules. If the bitter-spicy flavor makes you cough a little when you taste it, know that you are getting a dose of these special antioxidants!

Olive Oil Vinaigrette:

In a small bowl, whisk together

- ¼ c vinegar (red wine, white wine, or sherry vinegar are nice)
- 1 tablespoon honey
- 1 teaspoon mustard
- 1 small clove garlic, finely minced
- salt and pepper to taste

Continue to whisk well while slowly drizzling in

- 1 cup good quality extra-virgin olive oil

This vinaigrette is just one of many ways to add olive oil to your diet. Use liberally on salads, vegetables, potatoes, or wherever it seems like a good idea. Keeps well, refrigerated.



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A NOTE FROM THE NURSES

A New Member of the IMSMP Nursing Team: Rebecca Mogil, RN, BSN



Rebecca Mogil

Rebecca graduated magna cum laude from the University of Maryland School of Nursing in 2017 with a Bachelor of Science in Nursing. She then backpacked with her husband for three months throughout Asia, Europe, and Latin America before moving to NYC in April 2018. She started working at the IMSMP at the end of May 2018, and this is her first job as an RN. Rebecca's dad was diagnosed with MS before she was born, so MS has always been something very close to her heart. She states,

"I have already gained so much knowledge and honed new skills in the short time I have been at the Center. I feel so lucky to be part of the IMSMP team, surrounded by such bright, driven, patient, and passionate individuals every day."

PHYSICAL THERAPY AND REHABILITATION

A Team Effort: Obtaining Durable Medical Equipment



For some patients with multiple sclerosis, the appropriate medical equipment is the difference between one being able to function independently versus being dependent on others. Durable medical equipment (DME) is a general term for devices, products, or equipment that patients are provided by licensed vendors which are necessary as part of a treatment for a particular illness or condition. DME needs for people with MS can vary from a brace or cane to customized power wheelchairs.

The process to get DME covered in today's healthcare environment is usually time-consuming and the requirements for eligibility can be confusing. Whereas just having a diagnosis of MS should be enough for DME to be processed, there is more that must be done. Communication by the patient and caregivers to the nurses and physicians is a key component to ensuring the prescriptions for DME can be processed.

A physical therapy and/or occupational therapy consultation is an important element to ensure the appropriate DME is being considered and the steps to secure the DME can be discussed. For patients who see an IMSMP physical therapist, the initial steps to secure the DME will be coordinated by the physical therapist in collaboration with the nursing staff and neurologists, as well as a social worker in select cases.

There is some DME that is covered by insurance policies and some which are not. Communicating DME needs with the neurologist and nurse during an office visit along with setting up an appointment with a physical therapist can help ensure the patient knows how to get what they need. When a patient does get the DME, this also must be reported to the nurse and physician at all office visits. The reason for this is to declare the continued need for the equipment in case any repairs or replacements are required. If there is no mention in a physician note, this can delay requests for DME orders, replacements, or repairs.

NEW PERSONNEL

Welcome to the Team!

Please join us in welcoming two great additions to the Center. Kristina Mulroy joins us as the Marketing and Social Media Coordinator. Sarah MacCrae is our new Development Coordinator.



Sarah MacCrae

Sarah MacCrae joins us from Brooklyn, New York. Prior to starting at Tisch MSRCNY, she worked in fundraising and development at Winston Preparatory School in Manhattan. Sarah graduated from Manhattan College with a Bachelor's degree in Sociology. She is thrilled to join the Tisch MS team to cultivate relationships with new donors and philanthropists. Primarily, she looks forward to making a difference in the lives of people with MS.



Kristina Mulroy

Kristina Mulroy joined our team in July 2018. She graduated with a Bachelor's degree in Business Marketing from St. John's University. Kristina previously worked in marketing and public relations for Notre Dame Academy, an all-girls private school in Staten Island, New York. Prior to that, she interned at Chelsea Piers and NBC Sports Regional Network. She is excited to be a part of the Center and bring greater awareness to the incredible research, treatment, and care Tisch MSRCNY and the IMSMP offers.

DEVELOPMENT DEPARTMENT NEWS

Annual Tisch MS Future Without MS Gala



Our deepest gratitude to all of our supporters, including Meredith Vieira who graciously acted as emcee for the Tisch MS Research Center of New York's annual Future Without MS Gala. The evening was a huge success raising critical funds needed for the groundbreaking research happening in the Tisch MS Laboratory.

"My husband Richard and I have been part of the Tisch MS Family since meeting Dr. Sadiq at the Regenerative Medicine Conference held at The Vatican in 2013. After hearing him speak about his research and his philosophy on treating patients, we were inspired and made the decision to schedule a visit. We have been *Chasing Hope* with Dr. Sadiq by our side ever since."

Almost 400 people attended the event at Gotham Hall in New York City on October 18th, 2018.

Guests enjoyed cocktails, dinner, and musical performances before Auctioneer Pat Tully took the stage and entertained guests while they bid on fabulous prizes.

After one of the most successful and exciting live auctions to date, guests watched an emotional video featuring actress Jamie-Lynn Sigler. In the video, Jamie-Lynn discussed her shared hope that Dr. Sadiq and his team will one day discover the cause of and cure for multiple sclerosis.

The night concluded with Dr. Sadiq, joined by Meredith Vieira, announcing that this year's gala was one of the most successful ever.

The outstanding generosity of all the gala contributors inspires us to continue our work to find the cause and develop the cure for this disease. We are ever hopeful for a future without MS.

Fundraising at the Deep End of the Pool

Watched over by her swim muse (pictured), Patricia Deneroff often finds both comfort and exercise by spending time in the pool. For the past four years, she's made swimming laps her mission to raise money for our stem cell research by staging a lap-a-thon and inviting friends and family to sponsor her time in the water. This year, Patricia upped the ante and got the family involved. Joined by her grandniece Jeena, the two spent Labor Day weekend in the pool, banging out the laps, cheered on by the crowd. While Jeena's sisters Sutton and Nile stayed out of the water, they emptied their piggy banks and contributed to raising critical funds for our Center. Since her first lap-a-thon in 2015, Patricia and her family and friends have raised over \$71,000. Thank you, Patricia, for diving into fundraising!

Go Lenape Valley Patriots!

Lenape Valley Regional High School (LVRHS) just gave us a master class in AP Fundraising! A special thanks to LVRHS for supporting Tisch MS Research Center in honor of their School Superintendent, Paul DiRupo. Paul has been a patient of Dr. Sadiq's for 25 years and has seen first-hand the incredible work going on at the Center. "The staff and faculty are very generous and supportive of philanthropic organizations," said Mr. DiRupo. Incredibly, over 70 members of LVRHS' faculty and staff joined together to raise more than \$2,000!



Dr. Saud A. Sadiq and Meredith Vieira at the Future Without MS Gala



Pat Tully kicks off the Auction



Patricia Deneroff with her swim muse



Lenape Valley Regional High School Faculty and Staff

THANK YOU TO OUR FUTURE WITHOUT MS GALA DONORS*

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possible.

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TEAM TISCH MS NEWS

TCS NYC Marathon 2018

We've done it again! November 4th was a perfect day for a road race in NYC, and Team Tisch MS was on the course in full force. Congratulations to all our team members for triumphantly crossing the finish line and for spending an equal amount of effort fundraising for Tisch MSRCNY. This year the entire Team Tisch MS (which includes bike racers, Spartan warriors, and many others) has raised over \$101,000.

And the year isn't over! You can still donate to any of our racers at tischms.org/support.

Team Tisch MS Marathon Runners

Joao Goncalves	Bethany Welch
Blair Schwartz	Joseph Swift
Victoria LaManna	Jade Coyle
Megan Reilly	Amanda Oppenheimer
Frank Fellone	Nicole Sadozai (sidelined due to an injury)



Our very own
Amanda Oppenheimer



Blair Schwartz



Joao Goncalves



Joseph Swift and his
family

With Sincere Appreciation, We Honor & Recognize Our Donors*

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*This list includes donors of \$500 or more received between August 1st and October 31st, 2018, not including contributions supporting the 2018 Future Without MS Gala. While every contribution is deeply appreciated, we regret that we are unable to list gifts below \$500 due to spatial limitations.

Every effort has been made to ensure the accuracy of this list. Please email Sarah MacCrae, smaccrae@tischms.org or call (646) 557-3863 to report any errors or omissions, or if you would like to have your name removed from future listings.

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