

Movement Disorder Digest

What's On The Horizon For The Center

By *Zoltan Mari, MD*

It is my utmost pleasure to start our Fall 2016 newsletter with review of the exciting developments, new projects, and initiatives, as well as the no less amazing new team members joining us since our last spring's newsletter.

First and foremost, we thank you for your wonderful support and enthusiasm that helps our 2016 **Pacing 4 Parkinson's** (P4P) campaign become bigger and stronger every year. As usual, this will be part of the Baltimore Running Festival. The big day for this year's P4P is October 15 and we hope to see many of you there! You can register at <http://pacing4parkinsons.org/>. We have already started out at a record-beating pace!

This takes us to our faculty and staff, as a very important addition to our team, **GiGi Gray**, our new Health Educator and Outreach Coordinator, has taken over P4P responsibilities from Bailey Vernon. We are very excited to introduce several additional new team members. **Dr. Jee Bang** started this summer in our Division as an Assistant Professor. She joins us out of fellowship at University of California at SF. She is also an old friend who has spent considerable time in our Parkinson clinics while she was a neurology resident at Hopkins. We also welcome **Dr. Emile Moukheiber**, who joined as a movement disorder fellow this summer! Another addition is **Erica Stacy**, our Center's new Research Nurse! Further, **Medha Gudavalli** joined as a Research Assistant. Finally, we are pleased to announce that **Arita McCoy** is transitioning to a new position within our Center: she is going to be our new Nurse Practitioner. Please welcome all our new team members.

We have so many new projects and initiatives in our Center that it's hard to decide where to start! In fact, as usual, we include a full listing of research projects in the latter part of this newsletter. This article only reviews the highlights. The greatest highlight is that our Parkinson's Center has been selected by the School of Medicine as one of the few **Precision Medicine Centers of Excellence!**



With the expansion and evolution of DBS options, the introduction of Duopa, and further advanced therapeutics in the pipeline, we have decided to rename our "DBS Center", "The Johns Hopkins Center for Neuromodulation and Advanced Treatments in Movement Disorders" (**JH CoNATIM**). **Dr. Kelly Mills** is taking over the leadership of the new Center from me. The center will continue to operate organizationally under our greater Parkinson's Disease and Movement Disorder Center.

Our **Atypical Parkinsonism Center** has been helping an increasing number of patients with some of the most complicated and disabling forms of parkinsonism. It has steadily grown its stellar reputation under the leadership of **Dr. Alexander Pantelyat** and **Becky Dunlop**. Our **Ataxia Center** is also bigger and better than ever under the leadership of **Dr. Liana Rosenthal**. The **Center for Music and Medicine** is a new initiative in collaboration with the Peabody Institute, led by Dr. Pantelyat. Our **Dystonia Center** continues to be part of the NIH-funded **Dystonia Coalition** and aims to grow further. Our **Movement Disorder Clinical Fellowship** training program continues to attract top talent and helps train the next generation of movement disorder experts.

Our Center's robust clinical and research initiatives have experienced exponential growth since 2013. MARK-PD (PD cognitive biomarker project), PPMI (genetic cohort), Parkinsonics (the effect of choir singing on PD), tDCS (a number of various protocols), DBS research, many others, and clinical trials all need volunteers. Please review the list of our actively enrolling studies in this newsletter and contact us if you feel you are eligible and interested in volunteering for any of our research studies.

Pacing 4 Parkinson's— Baltimore Running Festival

The Pacing for Parkinson's (P4P) campaign allows us to participate and contribute to the mission of our Parkinson's center and the Johns Hopkins University. Each and every year, P4P participates in the Baltimore Running Festival to raise funds that support research, community outreach, and patient care at the Johns Hopkins Parkinson's Disease and Movement Disorder Center.

As you may know, this is Pacing for Parkinson's 8th year as a charity team at the Baltimore Running Festival. Last year's event had over 300 participants and raised over \$130,000 for the Center. Each participant individually fundraises and has the opportunity to achieve personal goals through the selection of race events, including the marathon, half marathon, team relay, and 5k. It is with great pleasure that I invite you to join our Pacing for Parkinson's signature event at the Baltimore Running Festival on October 15, 2016.

If you have not signed up, please use the following link to register: <http://pacing4parkinsons.org/>.

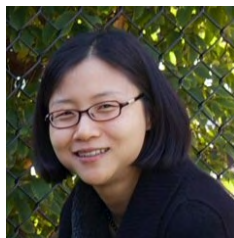


CENTER UPDATE

We are a center of excellence that strives to provide quality comprehensive care. The center is committed to serve our population and we are excited to present three new additions to the center.

NEW FACULTY HIGHLIGHT

Dr. Jee Bang is a board-certified neurologist who trained in neurology at the Johns Hopkins Hospital, and obtained her fellowship training in behavioral neurology at University of California San Francisco. She is especially interested in caring for patients with cognitive impairments and movement disorders including dementia with Lewy bodies, progressive supranuclear palsy, corticobasal syndrome, multiple system atrophy, and different types of ataxia. In her clinic, she also evaluates and treats patients with mild cognitive impairment, frontotemporal dementia, and Alzheimer's disease. As the clinical director of the Johns Hopkins Huntington Disease Center, Dr. Bang also works with patients and families with Huntington disease.

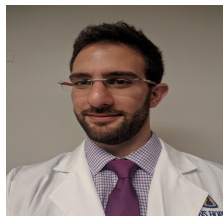


Jee Bang, MD

Dr. Bang is interested in devising and participating in clinical trials for patients with neurodegenerative diseases. She finds her work rewarding because she cherishes the relationships she builds with her patients and their families, and they keep her motivated in her work. She is excited to be back at Hopkins, and looks forward to meeting her new patients and families.

FELLOW HIGHLIGHT

Dr. Emile Moukheiber joined the center for his two year fellowship in July of 2016. He is a 2011 graduate of an MD program at the American University of Beirut. He subsequently completed his residency in neurology at Tufts Medical Center from 2012-2016.



Emile Moukheiber, MD

He has a variety of other medical experiences to include research on social phobias, public health work with a number of non-governmental organizations, as well as founding his own organization which pro-

vides home health care in the form of advanced nursing, physical therapy and occupational therapy to underserved communities in third world countries, with particular emphasis on neurodegenerative diseases.

His primary interests are in teleneurology, to help bridge the gap between the tertiary care available in well-funded facilities and the dearth of it in significantly underserved and remote areas. He also shares a particular interest in the field of music and medicine mainly the treatment of musicians dystonia.

Dr. Moukheiber is fully embracing his Movement Disorder Fellowship at Johns Hopkins and the opportunity to not only undergo a specialized training, but follow patients clinically, pursue his research interests, and support the local movement disorder community.

HEALTH EDUCATOR HIGHLIGHT

Guevien Gray, affectionately known as "**GiGi**", joined the center in May 2016 as our new Health Educator. She is a graduate from Bridgewater State University in Massachusetts with a Bachelor of Science in Health Education and in 2013 completed her Master of Science in Applied Gerontology at Towson University.



GiGi Gray

GiGi comes to us with experiences in community health, outreach, program planning, and care support. GiGi worked as a Case Manager implementing behavioral treatment plans and providing crisis interventions to individuals with Traumatic Brain Injury. She has utilized her skills working at Johns Hopkins Bayview Medical Center in Case Management assisting with both the administrative side of patient care and with therapy support. Before joining the team, she served as a Resident Services Coordinator at an affordable housing community for seniors, organizing place-based programs for over 200 individuals to increase their quality of life. From administrative and clinical support to community outreach, she hopes to reach more people as a resource to provide support.

OUTREACH: WORKING TOGETHER IN THE COMMUNITY

Boxing with Lynnette!

By GiGi Gray

Lynnette Chambers heard "Rock Steady Boxing" (RSB) and her interest was piqued. "Rock Steady Boxing" is an innovative boxing program for individuals living with Parkinson's disease (PD). This program, "gives people with PD hope by improving their quality of life through a non-contact boxing based curriculum".

Lynnette is an active and passionate participant in the Bel Air Parkinson's Disease Support Group. She took it upon herself to become trained in this program and completed training at a "Rock Steady Boxing" training camp. After discussion with fellow group members, Bob and Linda Havener, Lynnette began to investigate local resources. She pitched the idea of a boxing class to the owners of a local gym. After listening to Lynnette and watching the "Rock Steady Boxing" promotional video, the owner, Dennis Co-

ady, too was impressed.

opened his gym for several months to all PD individuals who wanted to use the gym or try boxing. He even kept his promise to get a trainer for boxing. Ten months later, with funding assistance from Pacing for Parkinson's and the Maryland Association for Parkinson's Support, Inc. (MAPS), the boxing class has been officially recognized as a "Rock Steady Boxing" class. Two trainers from the local gym are now certified in "Rock Steady Boxing".

Thanks to Lynnette for her enthusiasm in fighting this disease, embracing this new discovery, and imparting this idea to others. The classes are now offered for **free** twice a week with over 30 participants. Class location: Forest Hill Health and Fitness

<https://www.rocksteadyboxing.org/>



RESEARCH STUDIES

Condition	Title	Objective	Eligibility	PI	Contact
Parkinson's Disease	National Parkinson Foundation Patient Registry	Develop quality care standards for PD	All PD patients and care partners seen at the center	Zoltan Mari, MD (NA_00036863)	Becky Dunlop 410-955-8795
Parkinson's Disease	MARK-PD	Identify biomarkers for PD and PD-related cognitive impairment	Individuals diagnosed with PD or atypical PD and those without a neurological diagnosis	Liana Rosenthal, MD (NA_00031749)	Nadine Yoritomo 410-616-2822
Parkinson's Disease	APL-130277 for the Acute Treatment of OFF Episodes	Evaluate APL-130277 (sublingual version of Apokyn medication) in treatment of sudden "off-time" in PD	Individuals with PD, taking levodopa and having at least 2 hours of "off-time" daily	Zoltan Mari, MD (NA_00086593)	Nikki Mennucci 410-955-6684
Parkinson's Disease	Anxiety in Parkinson's	One day visit to assess anxiety symptoms in PD	All individuals diagnosed with PD	Gregory Pontone, MD (NA_00092051)	Kate Perepezko 410-614-1242
Parkinson's Disease	Rotigotine for Anxiety in PD	8 week study of Rotigotine for the treatment of anxiety disorders in PD	Individuals diagnosed with PD experiencing anxiety	Gregory Pontone, MD (NA_00092051)	Kate Perepezko 410-614-1242
Parkinson's Disease	MRI PD Study	One day visit to explore the relationship between cognition (e.g. memory) and emotion in PD	Individuals diagnosed with PD and those without PD	Gregory Pontone, MD (NA_00087276)	Kate Perepezko 410-614-1242
Parkinson's Disease and related disorders	Udall Center Longitudinal Study	Examine the relationship between the clinical symptoms of PD and the disease process in brain tissue (participation includes eventual brain donation)	Individuals diagnosed with PD or atypical PD and those without a neurological diagnosis	Liana Rosenthal, MD (NA_00032761)	Catherine Bakker 410-616-2814
Parkinson's Disease and related disorders	Udall Center Brain Donation Program	Examine the pathological changes in the brain tissue of individuals diagnosed with PD or related disorders as compared to controls	Individuals diagnosed with PD or atypical PD and those without a neurological diagnosis	Liana Rosenthal, MD (NA_00032761)	Catherine Bakker 410-616-2814
Movement Disorders	Genetic Characterization	To study the genetic risk factors involved in movement disorders	Individuals with PD, atypical parkinsonism, dystonia, ataxia, and Lewy body dementia	Jeffery Rothstein, MD, PhD (NA_00055442)	Sonja Scholz, MD, PhD 240-271-5297
Dystonia	Dystonia Coalition	Create repository to learn more about dystonia	Individuals over the age of 18 who have primary dystonia	Zoltan Mari, MD (NA_00074297)	Becky Dunlop 410-955-8795
Parkinson's Disease	DUOGLOBE	Measure the additional benefits of Duopa® therapy in post market analysis	Individuals eligible and cleared for Duopa® Therapy	Zoltan Mari, MD (NA_00088106)	Arita McCoy 410-955-2954
Parkinson's Disease	SURE-PD Study	Determine if treatment with Insosine can slow the worsening of Parkinson's disease.	PD patients diagnosed 3 years or less, taking no medication or only Azilect or Selegiline.	Zoltan Mari, MD (NA_00090505)	Becky Dunlop 410-955-8795
Parkinson's Disease	A Randomized Controlled Trial of OnabotulinumtoxinA for Depression in PD	To study if the drug onabotulinumtoxinA (BOTOX®) is helpful for the treatment of depression in PD	All individuals diagnosed with PD who have symptoms of depression	Alex Pantelyat, MD (NA_00082708)	Becky Dunlop 410-955-8795

RESEARCH STUDIES

Condition	Title	Objective	Eligibility	PI	Contact
Parkinson's Disease	Exploring Mechanisms for Neuropsychiatric Symptoms of PD using Transcranial Direct Current Stimulation (tDCS)	To study if tDCS helps depression, cognition, or other non-motor PD symptoms	All individuals diagnosed with PD who have symptoms of depression	Kelly Mills, MD (NA_0008795)	Yousef Salimpour 410-502-2666
Parkinson's Disease	Rhythmic Entrainment in Health and PD	Investigate if rhythmic sounds and non-invasive brain stimulation can change the brain's activity and improve hand coordination and walking in people with PD	Individuals diagnosed with PD and those without PD who are right handed and aged 18-89	Alex Pantelyat, MD (NA_0007832)	Anthony Gonzalez 443-923-2716
Parkinson's Disease	Parkinson's Progression Markers Initiative Genetic Cohort	Identify genetic links to PD and learn how the LRRK2 mutation affects certain populations of people (<i>Part of the Michael J. Fox Foundation Parkinson's Progression Markers Initiative</i>)	1.) Individuals diagnosed with PD who are of Ashkenazi Jewish decent 2.) Individuals without PD who are of Ashkenazi Jewish decent AND have a first degree relative with PD	Zoltan Mari, MD (NA_0003923)	Arita McCoy 410-955-2954

RESEARCH UPDATE

Do Your Parkinson's Disease Symptoms switch "On" and "Off"?

Arita McCoy, MSN, CRNP



As Parkinson's disease progresses, patients often experience fluctuating periods of movement symptoms, which can be described as "on" and "off" time. "On" episodes are characterized as periods of time when medications are working well and there is an improved sense of motor functioning. "Off" episodes often occur near the end of the medication cycle when movement ability is more disabling, often manifesting as increased stiffness, slowness, and resting tremor.

There is currently a FDA-approved, injectable medication called **apomorphine** (Apokyn®) which is used as rescue therapy in treatment of sudden "off" symptoms of Parkinson's disease. At Johns Hopkins (and other sites across the US), we are currently studying a novel formulation of this medication that can be given under the

tongue, which may potentially be a more efficient and convenient way to administer the drug. If enrolled, involvement in this study will last approximately **24 weeks**.

If you have any questions or are interested in receiving more information, please contact Nicola Mennucci at 410-955-6684.

Principal Investigator – Zoltan Mari, MD

IRB number (NA_00086593)

Parkinsonics

Aathmann Swaminathan, Research Assistant

The recently concluded Parkinsonics study aimed to assess whether weekly group singing improved Parkinson disease (PD) patients' voice, motor symptoms, and quality of life. The study was led by Alexander Pantelyat, MD and Becky Dunlop RN, MS.

It sought to improve upon the design of prior studies of singing in PD. The Parkinsonics study initially comprised of 32 participants. Participants then 'crossed over' to the other group and continued for another 12 weeks. Study assessments were performed every 6 weeks for 30 weeks (6 assessments in all). The sessions



were held at Govans Presbyterian Church in Towson, MD and were led by Leo Wanenchak, Ellen Talles and Bailey Vernon. Twenty-six of 32 participants completed the study. Feedback from our participants was generally positive, with many noting it as an enriching social experience. Our singers came from various backgrounds, giving the chorus a unique flavor. Observing (and listening!) to our participants was truly inspiring, and helped reiterate the notion that music possesses the power to heal and unite people despite difficult circumstances. At present, our research team is processing the data we have acquired, and we anticipate the

RESEARCH UPDATE

results to be published in the coming months. **Thanks to Pacing for Parkinsons and the Maryland Association for Parkinson's Support, Inc. (MAPS)** fundraising, the Parkinsonics will continue at a yet to be determined date. Please email me if interested in joining the chorus (aswamin2@jhmi.edu), and for future updates! **Stay TUNED!**



Deep Brain Stimulation and Cognition

Kelly Mills MD



Deep Brain Stimulation (DBS) has been used for over 20 years to treat movement symptoms in Parkinson's disease and essential tremor. It is also used to treat dystonia and other disorders. In Parkinson's disease, DBS can treat the "motor" symptoms such as tremor, stiffness, and slowness that are insufficiently treated with oral medications. However, less is understood about the effects on non-motor symptoms such as cognition.

"Cognition" describes thinking processes such as decision-making, processing speed, memory, navigation, and mental tasks we do every day. Prior research has indicated that when done to treat the motor symptoms of PD, DBS can potentially change cognition. Some patients report improvement in processing speed and others report improved clarity of thought when DBS has allowed a reduction in Parkinson's medications that may have been clouding cognition. On the other hand, DBS can sometimes affect verbal fluency, or the ability to rapidly call up words during conversation.

At our center, patients undergo a thorough evaluation with a neuropsychologist to characterize their cognitive strengths and

weaknesses prior to getting DBS, and we provide this feedback to the patient so that we can make a decision together on how safe it is to proceed with DBS. We are currently researching whether or not patients who have undergone DBS experienced a change in their cognition, either for the better or worse. We are calling patients who underwent DBS at our center for a 20-minute survey as part of this "DBS-Cognition" study. The questions have to do with the patient's experience before and after DBS surgery. If you or a family member underwent DBS at our center in the last 4-5 years and are interested in contributing your time to this research, please call Aathman Swaminathan 410-955-6672, if you have not already been contacted regarding this phone survey.

For those of you who contribute your time for this research, we greatly appreciate it. This research will help to shape how Parkinson's disease patients are treated with therapies such as DBS, so you are helping other PD patients who may need DBS in the future!

**This pilot work is a result of Pacing for Parkinson's Funding!
Thanks P4P!!!**

What is SURE-PD ?

Becky Dunlop, RN, MSN

SURE- PD stands for **Study of Urate Elevation In Parkinson's Disease**, Phase 3. Under the leadership of Zoltan Mari, MD, the Johns Hopkins Parkinson's Disease and Movement Disorders Center is one of over 60 centers nationally embarking upon this potentially disease modifying study. The goal of this study is to determine whether a treatment that raises levels of the antioxidant urate can slow the rate of Parkinson's disease progression over time. The treatment is a compound called inosine, which the body turns into urate. There is evidence that increased urate levels can predict both a lower risk of developing Parkinson's disease and a slower rate of its worsening over time. People with high levels of urate are less likely to develop Parkinson's disease. In addition, several studies have now shown that patients with Parkinson's disease who have high levels of urate have a slower progression of their Parkinson's disease.

SURE-PD3, will enroll 270 subjects across the United States. These



study volunteers must meet the following criteria: diagnosed with Parkinson's disease within the past three years; not currently taking any medication to treat Parkinson's disease (unless it is an MAO-B inhibitor); no history of gout, recurrent kidney stones, heart attack or stroke; and additional criteria.

Please phone Becky Dunlop RN, MS at 410-955-8795 or email: rdunlop@jhmi.edu for additional information.

EDUCATION

Advancing Professional Training to Improve Parkinson's Care

A key mission of the Johns Hopkins Parkinson's Disease and Movement Disorders Center is professional education. As a National Parkinson's Foundation Center of Excellence our center strives to educate other professionals about Parkinson's Disease and related Movement Disorders. Faculty and nursing professionals routinely lecture to other health team members. Center faculty develop and present professional education programs for physicians, allied team members, nurses, and home health aides. In the fall of 2015, we offered a full day Continuing Medical Education (CME) program for physicians in collaboration with Beebe Hospital in Lewes, Delaware. This fall, our nurses, Arita McCoy and Becky Dunlop, will join colleagues in Delaware to present a program on Parkinson's which will offer Continuing Education Units. Our center continues to be a lead site for the Edmond J. Safra Visiting Nurse Faculty Training at the Parkinson's Disease Foundation. Center professional education accomplishments include: a curriculum to train the state's Nursing Home Ombudsman; two national programs for home care aides and long term care professionals; and numerous CME programs. Professional education is the only way to impart knowledge and advocate for the appropriate management of this complex neurodegenerative illness. Our center is committed to improving care through education. Please contact the center at 410-955-8795 if you have a professional education need.

Focusing on Atypical Parkinsonism

The Johns Hopkins Parkinson's Disease and Movement Disorders Center collaborated with **Cure PSP** to offer an interactive half day seminar on April 9, 2016. Presenters included Alexander Pantelyat, MD; Shawn Smyth, MD; Becky Dunlop RN, MS; Charlene Foote, OT/L; La'Tai Jenkins, PT, DPT, PTII; and Kate Gerber SLP. The presentations focused on practical information and tips that can be used daily by the individuals and families living with Atypical Parkinsonism including Progressive Supranuclear Palsy (PSP), Multiple Systems Atrophy (MSA), and Cortical Basal Syndrome (CBS).

This seminar is a first locally. Attendees were greatly appreciative of the information provided and many continue to attend the center's Atypical Support Group which was officially launched this year. For more information on resources available to those living with Atypical Parkinsonism, please contact the Center's Nurse Director, Becky Dunlop RN, MS at 410-955-8795



My Journey with Parkinson's -Wendy Long

By GiGi Gray

When life offers you lemons, make orange juice and leave the world wondering how you did it! That's exactly what Wendy Long did. In 2013, the diagnosis of Parkinson's disease came as a shock to Wendy and her life took a new direction. This vibrant woman, wife, mother, daughter, and grandmother, full of life, was now faced with a new challenge to overcome. Even though this was going to be difficult, like all challenges, Wendy took it in stride to find hope in her new journey.

Wendy started to get involved, take control and managed her own care. She found a new neurologist who specialized in movement disorders, with whom she felt comfortable, and who had a strong history in providing quality care. After researching more on Parkinson's disease and talking to her neurologist, she quickly realized and accepted that exercise was a key factor in managing her disease. With the support of her family, she made exercise and a healthy lifestyle one of her primary methods to take back control. Wendy and her son Don, who is in full support of his mother, joined the Johns Hopkins Parkinson's Disease and Movement Disorders charity team Pacing for Parkinson's (P4P). The goal of P4P is to create community awareness, and ultimately improve the lives of those living with Parkinson's by raising funds for research, care, and support.

Wendy found hope and a clear direction to start her journey. That same year, Wendy did her first 5K race with P4P. Since then, she has completed fourteen 5K events, eight 5Ks in 2016, and even completed a virtual 10k. She exercises every day for 30

minutes on her treadmill and elliptical, and takes a boxing class twice a week. It has been 3 years since Wendy was diagnosed and she has become a more active person. This year Wendy completed an 8 week walking training program that will get her better prepared for this year's Baltimore Running Festival on October 15.



She has also taken the initiative to serve as a patient advocate on a committee at her workplace. Her mission is to educate people on Parkinson's disease (PD). Her son Don is the volunteer chairman of the P4P organizing committee. The volunteers organize, implement, and promote P4P events which venture to raise money and awareness through social media, friends, local businesses, and large organizations.

Together, Wendy and Don are doing a wonderful job in creating awareness of PD. In spite of the challenge of living with a chronic illness, Wendy refuses to give up and will continue to run in support of PD awareness. This again leaves us wondering how does she make orange juice out of lemons!



PARKINSON'S PROGRAM CALENDAR

These programs are presented by the *Johns Hopkins Parkinson's Disease and Movement Disorders Center* and made possible through the center's Dunlop Outreach and Education Fund, Pacing 4 Parkinson's, and our generous donors. Pre-registration is encouraged for all programs listed below. Please contact our center at **410-955-6692** to learn more about these programs. Visit our website at www.hopkinsmedicine.org/neuro/movement for a full listing.

◆ Parkinson's Disease Educational Series

3rd Wednesday of Every Month

7:00 p.m. - 9:00 p.m.

St. Thomas Episcopal Church, 1108 Providence Road, Towson, MD 21286

September 21 - *Jason Frank, CELA, Legal Planning*
 October 19 - *Jan Crye, OTR/L, CDRS, Driving*
 November 16 - *Liana Rosenthal, MD, Memory & Cognition*
 December 21 - *Q & A Panel*



◆ Atypical Parkinsonism Community Support Group

4th Thursday of Every Month

2:00 p.m. - 4:00 p.m.

St. Thomas Episcopal Church, 1108 Providence Road, Towson, MD 21286
 Becky Dunlop, 410-955-8795 or rdunlop@jhmi.edu

◆ Surgical Therapeutics for Parkinson's: Deep Brain Stimulation & Duopa Information Session

Wednesday, November 9

6:00 p.m. - 8:30 p.m.

St. Thomas Episcopal Church, 1108 Providence Road, Towson, MD 21286
 Register online - <http://tinyurl.com/dbs-duopa-nov16>

◆ Newly Diagnosed Parkinson's Disease Educational Forum

Friday, November 18

9:00 a.m. - 12:00 p.m.

St. Thomas Episcopal Church, 1108 Providence Road, Towson, MD 21286

Register online - <http://tinyurl.com/jhpdnovember2016>

◆ Local Parkinson's Organization

Maryland Association for Parkinson's Support (MAPS)

www.marylandparkinsonsupport.org

info@marylandparkinsonsupport.org - (443) 470-3223

MAPS is a local non-profit organization dedicated to providing meaningful programs that will support the entire PD community. Contact MAPS if you are interested in supporting the cause, volunteering, or receiving updates.



Community Events

◆ Martini Shake Off

Thursday, September 15

To benefit JHU PDMD Pacing 4 Parkinson's
 4 p.m. - 10 p.m.

Argosy Café, Baltimore

www.argosycafe.com/events/pacing4parkinsons

◆ Bev Battles Parkinson's One Night Can Make a Difference

Saturday, October 22

VFW Post 6506

Proceeds benefit Parkinson Research and Education at JHU

7 p.m. - 11 p.m.

8777 Philadelphia Road, Baltimore MD 21237

Mike Bruno - 443-250-5470

◆ Team Happy Hour and T-Shirt Pick up Squire's Italian Restaurant

Wednesday, September 28

To benefit JHU PDMD Pacing 4 Parkinson's

5 p.m. - 8 p.m.

6723 Holabird Ave. Dundalk, MD 21222

◆ Pints for Parkinson's and T-Shirt Pick up Portside Tavern- Canton

Thursday, September 22

To benefit JHU PDMD Pacing 4 Parkinson's

6 p.m. - 9 p.m.

2821 O'Donnell Street, Baltimore, MD 21224

www.pacing4parkinsons.org

◆ Pacing 4 Parkinson's Saturday, October 15, 2016

7:00 a.m.

Baltimore Running Festival, M&T Bank Ravens Stadium

www.pacing4parkinsons.org



The Johns Hopkins Parkinson's Disease and Movement Disorders Center

The Johns Hopkins Parkinson's Disease and Movement Disorders Center is dedicated to the tripartite mission of education, research, and excellent care of those living with movement disorders.

Johns Hopkins Outpatient Center
601 North Caroline Street, Suite 5064, Baltimore, MD 21287
410.502.0133
www.hopkinsmedicine.org/neuro/movement
Zoltan Mari, MD, *Director*
Becky Dunlop, RN, MS, *Associate Director*

Please consider supporting our center! The work of the Johns Hopkins Parkinson's Disease and Movement Disorders Center would not be possible without the generous support from our patients and the community. For more information about supporting the center, please contact the Development Office at **443-287-7877**.

Physicians

Jee Bang, MD
Ted Dawson, MD, PhD
Zoltan Mari, MD
Kelly Mills, MD
Alex Pantelyat, MD
George Ricaurte, MD, PhD
Liana Rosenthal, MD

Fellows

Ankur Butala, MD
Martin Kronenbuerger, MD
Emile Moukheiber MD
Sonja Scholz, MD,PHD

Additional Faculty

Jason Brandt, PhD
Valina Dawson, PhD
Daniel Gold, DO
Stephen Grill, MD, PhD
Gregory Pontone, MD
Shawn Smyth, MD
Howard Weiss, MD

Neurosurgical Team

William Anderson, MD, PhD
Frederick Lenz, MD, PhD

Allied & Research Team

Catherine Bakker, MS
Carrie Berlett, BS
Marsha Davis, RD, LD
Becky Dunlop, RN, MS
Regina Felton, BS
Amanda Gallagher, MA, CCC-SLP
La'Tai Jenkins, PT, DPT
Vanessa Johnson, BS
Arita McCoy, MSN, CRNP
Nikki Mennucci, BS
Jennifer Millar, PT
Kate Perepezko, MSPH
Carrie Speck, BA
Aathman Swaminathan, BS
Donna Tippet, MA, MPH, CCC-SLP
Nadine Yoritomo, RN, BSN, CCRP
GiGi Gray, MS
Erica Stacy, RN, BSN

Disclaimer: The *Movement Disorder Digest* is published by the Johns Hopkins Parkinson's Disease and Movement Disorders Center to provide timely and useful information. Every effort has been made to verify the accuracy of the content. However, this newsletter is not intended to provide specific medical advice, and individuals are urged to follow the advice of their physicians. The PDMD Center is not responsible for the information or opinions expressed in its articles. If you prefer not to receive fundraising communications from Johns Hopkins Medicine, please contact us at **1-877-600-7783** or FJHMOptOut@jhmi.edu. Please include your name and address so that we may honor and acknowledge your request.

Movement Disorder Digest
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and Movement Disorders Center*
601 North Caroline Street, Suite 5064
Baltimore, MD 21287

JOHNS HOPKINS
MEDICINE

