### 2234<sup>th</sup> Conference Parkinson 2018









5<sup>th</sup> International Conference on

### PARKINSON'S DISEASE AND MOVEMENT DISORDERS

October 19-20, 2018 | New York, USA

# Keynote Forum

Day 1

### PARKINSON'S DISEASE AND MOVEMENT DISORDERS

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## Ben Weinstock

Weinstock Physical Therapy, USA

#### Sensory receptor stimulation: A non-pharmaceutical way to help the Parkinson's patient

The skin, with its numerous types of sensory receptors, is often overlooked in the treatment of people with Parkinson's disease (PD). These receptors provide critical feedback to the brain in terms of proprioception, pressure, pain, stretch, and temperature. Various methods of sensory stimulation, such as via manual pressure, acupuncture, electrical stimulation, and massage, have been shown to trigger changes in levels of brain connectivity in people with PD. This has been objectively demonstrated with functional Magnetic Resonance Imaging. Moreover, levels of Brain-Derived Neurotrophic Factor also increase after sensory stimulation. Sensory stimulation often results in immediate and observable improvements in posture, gait, and functional abilities which can last up to several days. Mechanical stimulation applied to points on the feet (corresponding to the head of the first metatarsal and the tip of the great toe) have repeatedly been demonstrated to not only improve freezing of gait but also to normalize gait parameters (such as stride length). Electrical stimulation applied to acupuncture points on the body and to the ear improve motor as well as non-motor disturbances (presumably through modulation of the vagus nerve). Skin taping, commonly used to treat athletes, has been shown to improve posture and gait when applied to key areas of the spine, neck, and lower extremities. It is theorized that taping improves proprioceptive input which is almost always disturbed in PD. Sensory stimulations are especially important for patients who exhibit exercise intolerance and are unable to stimulate their receptors via exercise.

#### **Biography**

Ben Weinstock has over 30 years of experience in the rehabilitation of patients suffering from complex medical and neurological conditions. He has presented previously at international conferences. In 2015, he wrote and published the only book about the prevention of PD. In 2017, he began to present his course, Exercise Prescription, Individualized Care for PD (EPIC-PD™) to Doctors of Physical Therapy. EPIC-PD is the only methodology that takes motor and non-motor factors into account to develop an individualized exercise and lifestyle prescription for a person with PD.

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# John M Baumann

University of Louisville, USA

#### Guaranteed to show you how to successfully re-invent yourself

If you have decided that you desperately and passionately commit to transforming yourself no matter how much effort, time and sacrifice that it will take, keep reading, this information is for you. As the well-known expression goes, "The definition of insanity is doing the same thing over and over again and expect that you are going to get a different result." Many of us have never learned this lesson. We hold on to familiar approaches to life issues when deep down inside we know that we will get the same result, although unhealthy, one that we are actually comfortable with. Doing something different takes either a very brave person or a very desperate person. I recommend that you take the bravery route and not wait for you to become desperate, some call it "hit rock bottom." Being exposed to someone who is brave enough to transform, or is in the process of transforming his or herself, a mentor makes a tremendous difference because you realize that it is possible to succeed, "If they can do it, so can I." Seek out a mentor, I have broken this down into two parts using an old adage adapted to fit my needs. First, "out with the bad." Then, "in with the John good."

#### **Biography**

John M. Baumann inspires and helps real people to live their lives to the fullest, and even embrace their life-changing event, with the goal of uncovering their life's purpose (JohnBaumann.com). He is an internationally-recognized inspiring success speaker. In 2002, at 41 years old, working as the top attorney for a public company, he was diagnosed with Parkinson's disease. From 2005 until 2014, he taught law at the College of Business at the University of Louisville to over 1,000 undergraduates. He was selected the most inspiring professor. He wrote a book entitled, "Decide Success - You Dead Yet. He earned his Juris Doctorate degree from Cornell Law School after graduating Summa Cum Laude with a Bachelor's Degree in Business Administration from the University of Massachusetts, School of Management. As an attorney, he has passed the bar and practiced law in Texas, Louisiana and New Jersey before becoming General Counsel of a NASDAQ listed corporation headquartered in Kentucky.

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### PARKINSON'S DISEASE AND MOVEMENT DISORDERS

October 19-20, 2018 | New York, USA



AV Srinivasan

The Tamil Nadu Dr MGR Medical University, India

#### Management of parkinsonism in this millennium—A ten step approach

One of the most common Neurodegenerative disorder is Parkinsons' disease (PD), with over 4 million victims identified worldwide. Ageing has been implicated as an important risk for Parkinsons' disease, with the majority of cases occurring in people above the age of 60 years. Now that our population is experiencing an extended lifespan, the prevalence of Parkinson's disease is likely to increase substantially. Indeed, it is estimated that one in forty persons will develop this disease. Parkinson's disease was described by James Parkinson in as the second most common cause of death in the elderly and it requires an allout effort is needed to address this clinical problem 1817 as a clinical syndrome presenting with bradykinesia, tremor and slow, shuffling gait with postural instability. Rigidity was described later, but is included as a key clinical feature in the current diagnosis makes up approximately 80% of the case of Parkinsonism. A ten step approach is discussed to address all the issues in its management. 1) Clinical diagnosis including UKPDS Brain Bank clinical diagnostic criteria from the UK. 2) Epidemiology. 3) Etiological factors which include accelerated aging, Oxidative stress, genetic susceptibility, environmental toxins, and drugs. 4) Natural history with a correlation of progressive disability with biological and pathological changes in Parkinson's disease. 5) Management options in early disease. 6) Advanced Parkinson's disease. 7) Treatment of motor complications. 8) Management of non-motor symptoms. 9) Non-pharmacologic management.10) Surgical intervention.

#### **Biography**

AV Srinivasan is the former President of Indian Academy of Neurology and also he is the emeritus professor of The Tamilnadu DR MGR Medical University. He is driven by his quest for excellence and the latest discoveries on human brain related disorders, joined Madras Medical College (MMC) and received MD(General Medicine) in 1978. Later he pursued and received DM in Neurology from his Alma mater. He is first Neuro physician of his state Tamil Nadu in India in government service to be conferred, the fellow of the Royal College of Physicians (FRCP) in London in 2012, fellowship of the Indian Academy of Neurology 2004 and fellowship by the American Academy of Neurology, in 2003. He is the first Indian to receive the American Indian Neurology Award (AINA) in the USA in 2001, for the best paper presentation IN STROKE during annual American Academy of Neurology meeting in 2001 in Philadelphia. By the Tamil Nadu DR MGR Medical University. Currently serving as a member in the ACADEMIC COUNCIL of National Institute of Mental health and Neurosciences, Deemed University, Bangalore.

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# Keynote Forum

Day 2

### PARKINSON'S DISEASE AND MOVEMENT DISORDERS

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# AV Srinivasan

The Tamil Nadu Dr. MGR Medical University, India

#### Frequency and risk factors association of fall among the idiopathic Parkinson's patients in Bangladesh

**Background:** Parkinson's disease is the second most common neurodegenerative disease worldwide. Fall is a common scenario in our day to day clinical practice among the older people but it is more common among the Parkinson's people.

**Objectives:** The study was conducted to assess the frequency of fall and to ascertain the risk association among the idiopathic Parkinson's patients.

**Methodology:** The observational study was conducted from July to December 2017 in the district of Jessore, Bangladesh. Both the male and female clinically diagnosed as idiopathic Parkinson's disease without taking antiparkinsonian medication were recruited in the study. Those having Parkinson's disease due to stroke or secondary causes, orthostatic hypotension, taking antiparkinsonian drugs and the drugs may mimicking Parkinson's disease were excluded from the study.

Result: A total of 111 patients were analyzed of which 69.4% (N=77) male and 30.6% (N=34) female with the mean age of our participants were 66±10 years. The event of fall among the idiopathic Parkinson's patients was 36.9% in the last one year where single, two and three or more episodes of fall were 20.7%, 3.6%, and 12.6% respectively. No significant difference observed between faller and non-fallers among different demographic characteristics including age (p:0.091) sex (p:0.058) educational level (p:0.235), occupational status (p:0.220) and residency (p:0.547). Experience of fall found more in high BMI (p:0.037), hypertensive (p:0.018), diabetic (p:0.009) and in patients receiving multiple medications (p:0.011). But the duration of Parkinsonism (p:0.835) does not increase fall.

**Conclusion:** Identification of risk factors in preventing falls has become one of the most important unmet needs in Parkinson's disease and potential strategies to prevent falls should be focused.

#### Biography

AV Srinivasan is the Emeritus Professor of The Tamilnadu Dr. MGR Medical University. He has driven by his quest for excellence and the latest discoveries on human brain related disorders, joined Madras Medical College (MMC) and received MD (General Medicine) in 1978. Later he pursued and received DM in Neurology from his alma mater. He is first Neurophysician of his state Tamil Nadu in India in government service to be conferred, the Fellow of the Royal College of Physicians (FRCP) in London in 2012, fellowship of the Indian Academy of Neurology 2004 and fellowship by the American Academy of Neurology, in 2003. He is the first Indian to receive American Indian Neurology Award (AINA) in the USA in 2001, for the best paper presentation In Stroke during Annual American Academy of Neurology meeting in 2001 in Philadelphia by the Tamil Nadu Dr. MGR Medical University. Currently, serving as a Member-in the Academic Council of National Institute of Mental health and Neurosciences, Deemed University, Bangalore.

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# Rajendra D Badgaiyan

Icahn School of Medicine at Mt Sinai, USA

### Differentiating Parkinson's dementia from other types of dementia

iagnosis of Parkinson's dementia is mostly clinical. However, there are many forms of demetia. Treatment approach of some forms of demetia is different from those of the Parkinson's type. For example dementia due to Alzheimer's disease are dependent on acetyl choline neurotransmission while Parkinson's demetia is due to dysregulated dopamine neurotransmission. Because of subjective nature of clinical diagnosis, many patients are misdiagnosed with a different type of dementia, resulting in patients receiving wrong treatment. It is therefore important to have a diagnostic method that allows us to differentiate dopamine and acetyl choline dependent dementia. A novel neuroimaging technique that we recently developed could be useful in this context. The technique called single scan dynamic molecular imaging technique (SDMIT) uses positron emission tomography (PET) to detect, map and measure dopamine released acutely during cognitive or behavioral processing. It exploits the competition between a neurotransmitter and its receptor ligand for occupancy of the same receptor site. In this technique after patients are positioned in the PET camera, a radio-labeled neurotransmitter ligand is injected intravenously and the PET data acquisition started. These data are used by a receptor kinetic model to detect, map and measure neurotransmitter released dynamically in different brain areas. Patients are asked to perform a cognitive task while in the scanner and the amount of neurotransmitter released in different brain areas measured. By comparing it with the data acquired in age-matched healthy volunteers during performance of a similar task, it is possible to determine which neurotransmitter release is dysregulated in the patients and whether the dysregulation is responsible for clinical symptoms. Finding of a significant dysregulation of dopaminergic neurotransmission would indicate a diagnosis of Parkinson's dementia while dysregulated acetyl choline neurotransmission would suggest dementia of Alzheimer's type.

#### **Biography**

Rajendra D Badgaiyan, MD, is a psychiatrist and cognitive neuroscientist. He is Chairman of the Department of Psychiatry and Behavioral Sciences at Richmond University Medical Center, and Professor of Psychiatry at Icahn School of Medicine at Mount Sinai in New York. He received formal training in psychiatry, psychology, cognitive neuroscience, molecular imaging and neuroimaging. He was awarded the prestigious BK Anand National Research Prize in India and Solomon Award of Harvard Medical School. His research is focused on the study of neural and neurochemical mechanisms that control human brain functions. He developed the single scan dynamic molecular imaging technique (SDMIT) to detect, map, and measure neurotransmitters released acutely in the human brain during task performance. This technique is now used in laboratories all over the world. Using this technique, he studies dopaminergic control of human cognition and behavior. He is also interested in learning the nature of dysregulated dopamine neurotransmission in psychiatric and neuropsychiatric conditions. His research is funded by NIMH, NINDS, VA, and various foundations. Previously he served in the faculty of Harvard Medical School, SUNY Buffalo and University of Minnesota. He has published extensively in peer-reviewed journals.

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### PARKINSON'S DISEASE AND MOVEMENT DISORDERS

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Azza A Ali
Al Azhar University, Egypt

## Comparison between the efficacies of pomegranate with different combinations against development of parkinsonism using rotenone model in rats

**Background:** Parkinson's disease (PD) is a geriatric neurodegenerative disorder marked by the gradual loss of the ability to control physical movements. Exposure to different environmental agents including rotenone (RT) has been linked to increased degeneration and risk of PD. The gold standard effective therapy in PD is L-dopa despite its long-term treatment side effects. In medical folklore, Pomegranate (POM) has been extensively referenced due to its dopaminergic neuroprotective effect while Vinpocetine (VIN) is claimed to enhance brain neurotransmitter, glucose, and oxygen consumption as well as cerebral blood flow. Propolis has been also demonstrated for treatment and prevention of PD while Cocoa can reduce associated symptoms as stress, depression and promote better memory.

**Objective:** To evaluate and compare the efficacy of POM together with each of VIN, Propolis, Cocoa or L-dopa with L-dopa alone using RT-induced PD rat model.

Methods: Rats were divided into six groups: one normal and five RT model groups. One of RT (2.5mg/kg SC) groups served as non-treated PD model while the others were treated with either L-dopa (10mg/kg PO) or with POM (150mg/kg PO) together with each of the following; Vin (20mg/kg PO), Propolis (300mg/kg PO), Cocoa (24mg/kg PO) or L-dopa (10mg/kg PO) all for 19 days. Motor and cognitive performances were examined using three tests (catalepsy, open-field, Y-maze). Striatal dopamine, norepinephrine, serotonin, and acetylcholinesterase were assessed as well as mitochondrial complex-1, MDA, SOD, TAC, IL-1 $\beta$ , TNF- $\alpha$ , and caspase-3 expression. In addition, histopathological examinations of different brain regions were also determined.

**Results:** Concurrent treatment with L-dopa alone or with all POM combination groups ameliorated the impairments in locomotor activities as well as cognition and attenuated the depletions in monoamines and mitochondrial complex-1 contents. In addition, the elevations in acetylcholinesterase activity, oxidative stress, and inflammatory markers as well as caspase-3 expression induced by RT were also decreased.

**Conclusion:** Combinations of POM with each of VIN, Propolis or Cocoa have beneficial effects against the development of PD and represent a promising disease-modifying therapy even without given as an adjuvant to L-dopa, consequently can be recommended in protection or in treatment course especially when given early.

#### **Biography**

Azza A Ali has completed her PhD specialized in Pharmacology and Toxicology from Cairo University, Egypt. Her postdoctoral studies included different scientific aspects especially on neurodegenerative disorders; she also developed research line of behavioral pharmacology in Egypt. She is a member of many scientific societies as (AAPS) and Alzheimer's Association (ISTAART). She is also Editorial Board Member of many international Journals as Brain Disorder & Therapy, Acta Psychopathologica, EC Pharmacology and Toxicology as well as Organizing Committee Member and Chairperson at many international Conferences as the International Conference on Brain Disorders & Dementia Care, Canada (2017) and International Conference on Parkinsons Disease & Movement Disorders, USA (2017). She published more than 60 papers in reputed journals, supervised and discussed more than 90 PhD and MSc thesis and actively participated by oral and posters presentations at many international conferences especially on Alzheimer's disease and Dementia as well as on Parkinsons disease as Dementia Conferences (2015, 2016), Alzheimer's Association International Conference (AAIC 2016, 2017) and Parkinsons Conference (2017). She has many appreciation certificates and certificate of best presentation award at the 19th International Conference on Environmental Pollution and Pollution Control, London, UK (ICEPPC 2017). Now she is a Head of Pharmacology and Toxicology Department at Al-Azhar University, Egypt.

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