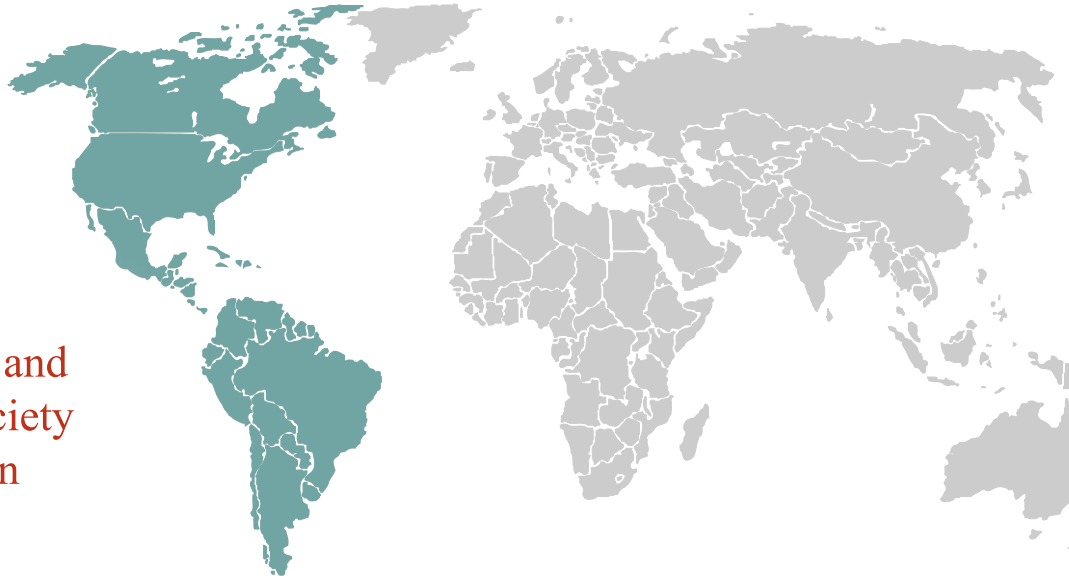
International Parkinson and
Movement Disorder Society
Pan American Section



FINAL PROGRAM

2nd Pan American Parkinson's Disease and Movement Disorders Congress

JUNE 22-24, 2018 MIAMI, FLORIDA, USA

www.pascongress2018.org

Table of Contents

Dear Colleagues,

On behalf of the International Parkinson and Movement Disorder Society – Pan American Section (MDS-PAS), we would like to formally welcome you to Miami, FL, USA for the 2nd Pan American Parkinson's Disease and Movement Disorders Congress.

We are excited to have you participate in this important meeting, which gives us a forum to discuss relevant issues in our field that are specific to the Pan American Section. This will also be a tremendous opportunity for you to interact with colleagues from different parts of Pan America.

We hope that along with networking with colleagues, you are able to take full advantage of the exceptional Scientific Program, visit the exhibit and poster hall, participate in guided poster tours and witness the Challenging Case MDS-PAS Rounds.

We welcome you to Miami and thank you for taking the opportunity to be part of this important event.

Cynthia Comella
Chair, PAS Congress Scientific Program Committee

Henrique Ferraz
Chair, PAS Congress Oversight Committee

About MDS

The International Parkinson and Movement Disorder Society (MDS) is a professional society of clinicians, scientists, and other healthcare professionals who are interested in Parkinson's disease, related neurodegenerative and neurodevelopmental disorders, hyperkinetic movement disorders, and abnormalities in muscle tone and motor control.

PURPOSE, MISSION AND GOALS

Purpose:

The objective and mission of the Society shall be to advance the neurological sciences pertaining to Movement Disorders; to improve the diagnosis and treatment of patients; to operate exclusively for scientific, scholarly and educational purposes; to encourage research; to provide forums, such as medical journals, scientific symposia Regional and International Congresses, for sharing ideas and for advancing the related clinical and scientific disciplines; to encourage interest and participation in the activities of the Society among healthcare and allied professionals and scientists; and to collaborate with other related professional and lay organizations.

Mission and Goals:

To disseminate knowledge about Movement Disorders by:

- Providing educational programs for clinicians, scientists and the general public designed to advance scientific and clinical knowledge about Movement Disorders
- Sponsoring Regional and International Congresses and Symposia on Movement Disorders
- Collaborating with other international organizations and lay groups
- Publishing journals, videotapes and other collateral materials committed to high scientific standards and peer review

To promote research into causes, prevention and treatment of Movement Disorders by:

- Using the Society's influence and resources to enhance support for research
- Facilitating the dissemination of information about research
- Encouraging the training of basic and clinical scientists in Movement Disorders and related disorders

For the purposes of favorably affecting the care of patients with Movement Disorders, the Society will provide expertise, advice and guidance to:

- Regulatory agencies to assist them in the approval process of safe and effective therapeutic interventions
- The public (media) and patient support groups by informing them of new research and therapeutic advances
- Governments to assist them in the development of policies that affect support of research and patient care
- Educational efforts to assist in developing standards of training in the specialty

MDS OFFICERS (2017-2019)

President
Christopher Goetz,
USA

President-Elect
Claudia Trenkwalder,
Germany

Secretary
Susan Fox,
Canada

Secretary-Elect
Bastiaan Bloem,
Netherlands

Treasurer
Victor Fung,
Australia

Treasurer-Elect
Louis Tan,
Singapore

Past-President
Oscar Gershanik,
Argentina

About MDS-PAS Section

MISSION AND GOALS

The mission of the MDS-PAS is to represent and promote the International Parkinson and Movement Disorder Society (MDS) in Pan America. Membership of MDS-PAS is open to all members of MDS within the Pan American region.

MDS-PAS aims to facilitate communication between clinicians and researchers in the region; disseminate updated knowledge about Movement Disorders; improve quality of life and independence of Movement Disorders patients and caregivers; and promote research in Movement Disorders within the region.

MDS-PAS OFFICERS (2017-2019)

Chair
Henrique Ferraz,
Brazil

Chair-Elect
Cynthia Comella,
USA

Secretary
Hubert Fernandez,
USA

Secretary-Elect
Alberto Espay,
USA

Treasurer
Pedro Chana-Cuevas,
Chile

Treasurer-Elect
William Fernandez,
Colombia

Past-Chair
Francisco Cardoso,
Brazil

PAS CONGRESS OVERSIGHT COMMITTEE

Chair: Henrique Ferraz, *Brazil*
Francisco Cardoso, *Brazil*
Cynthia Comella, *USA*
Oscar Gershanik, *Argentina*
Wassilios Meissner, *France*
Carlos Singer, *USA*

PAS CONGRESS SCIENTIFIC PROGRAM COMMITTEE

Chair: Cynthia Comella, *USA*
Francisco Cardoso, *Brazil*
William Fernandez, *Colombia*
Henrique Ferraz, *Brazil*
Oscar Gershanik, *Argentina*
Christopher Goetz, *USA*
Jennifer Goldman, *USA*
Marcelo Merello, *Argentina*
Jill Ostrem, USA
Mayela Rodriguez Violante, *Mexico*
David Standaert, *USA*
Okasana Suchowersky, *Canada*

Continuing Medical Education (CME) Information

TARGET AUDIENCE

Clinicians, researchers, post-doctoral fellows, medical residents, medical students, allied health professionals with an interest in current clinical trends and approaches for diagnosis and treatment of movement disorders.

OBJECTIVES

1) Identify the pathophysiology and microbiology of Parkinson's disease and other movement disorders.
2) Appraise diagnostic approaches for management of Parkinson's disease and other movement disorders.
3) Evaluate pharmacological and non-pharmacological treatment options available for Parkinson's disease and other movement disorders.

SATISFACTORY COMPLETION

Your chosen sessions must be attended in their entirety. Partial credit of individual sessions is not available. If you are seeking continuing education credit for a specialty not listed in the Accreditation Statement, it is your responsibility to contact your licensing/certification board to determine course eligibility for your board requirement.

ACCREDITATION STATEMENT

In support of improving patient care, this activity has been planned and implemented by Amedco and the International Parkinson and Movement Disorder Society. Amedco is jointly accredited by the American Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

CREDIT DESIGNATION STATEMENT

Amedco designates this live activity for a maximum of *17.50 AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

FACULTY DISCLOSURES

All individuals in control of content for the 2018 PAS Congress are required to disclose all relevant financial relationships. Disclosure information is available online at www.pascongress2018.org.

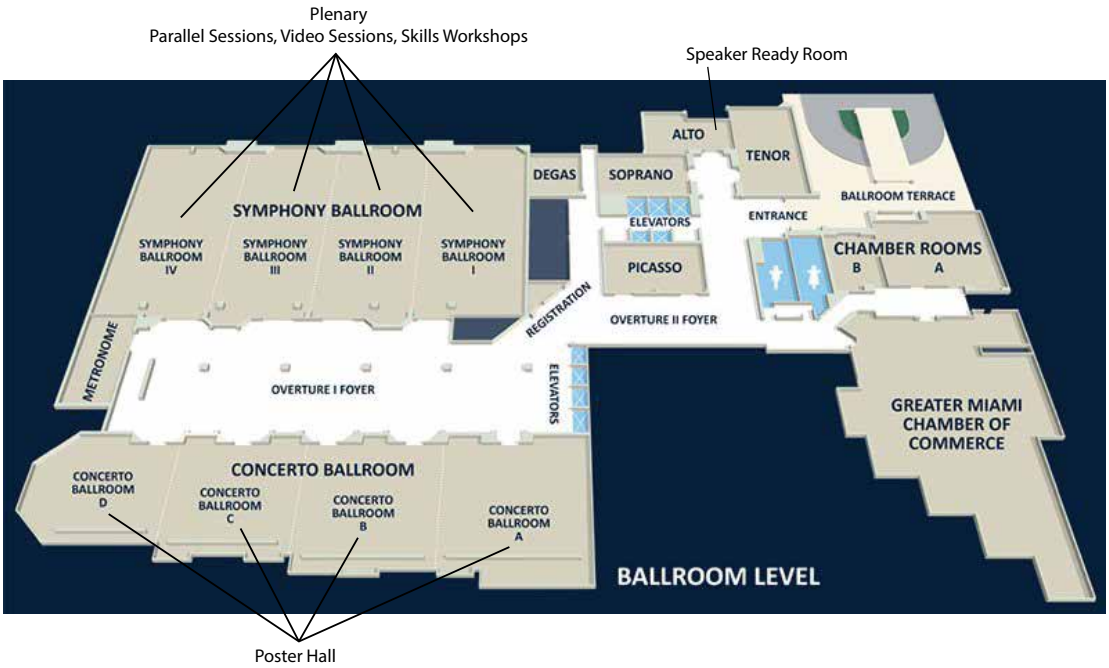
PAS CONGRESS EVALUATIONS

Printed evaluation forms will be available at each session. Please complete the evaluations and return them to a member of the MDS staff. Your input and comments are essential in planning future educational activities.

CLAIMING CME

Please visit www.pascongress2018.org to claim CME for this activity. When the requested fields are completed, a CME certificate will be provided to you via email. Please be advised: 2018 PAS Congress CME must be claimed by July 31, 2018. Please contact education@movementdisorders.org with any questions.

Hilton Miami Downtown Floor Plan



Schedule-At-A-Glance

	FRIDAY, JUNE 22, 2018	SATURDAY, JUNE 23, 2018	SUNDAY, JUNE 24, 2018
7:00		Corporate Therapeutic Symposia 6:45 - 7:45	
7:30			
8:00	Plenary 1 8:00 - 9:45	Plenary 3 8:00 - 9:45	Plenary 5 8:00 - 9:45
8:30			
9:00			
9:30			
10:00	Break 9:45 - 10:15	Break 9:45 - 10:15	Break 9:45 - 10:15
10:30	Plenary 2 10:15 - 12:00	Plenary 4 10:15 - 12:00	Plenary 6 10:15 - 12:00
11:00			
11:30			
12:00	Break 12:00 - 12:15	Break 12:00 - 12:15	END
12:30	Corporate Therapeutic Symposia 12:15 - 13:15	Corporate Therapeutic Symposia 12:15 - 13:15	
13:00			
13:30	Break & Poster Session/ Guided Poster Tours 13:00 - 14:30	Break & Poster Session/ Guided Poster Tours 13:00 - 14:30	
14:00			
14:30	Parallel Sessions 14:30 - 16:30	Parallel Sessions 14:30 - 16:30	
15:00			
15:30			
16:00			
16:30	Break 16:30 - 17:00	Break 16:30 - 17:00	
17:00	Skills Workshops/Video Sessions 17:00 - 18:30	Skills Workshops/Video Sessions 17:00 - 18:30	
17:30			
18:00			
18:30	Break 18:30 - 19:00	Break 18:30 - 19:30	
19:00	Welcome Ceremony 19:00 - 21:00		
19:30		Challenging Case MDS-PAS Rounds 19:30 - 22:00	
20:00			
20:30			

Special Meeting Theme: The PAS Congress Scientific Program Committee has selected a theme that is highlighted throughout the meeting. This year's theme, *Movement Disorders Across the Americas: Translating Science to Clinical Practice,* will be showcased in two Plenary Sessions, one Parallel Session and one Skills Workshop. Themed sessions are designated in the program with  .

Session Definitions

Challenging Case MDS-PAS Rounds:

During the Challenging Case MDS-PAS Rounds, attendees will witness clinical experts evaluate a case by phenomenology, syndromic classification and differential diagnosis. Presenters will discuss complex movement disorder cases which emphasizes unusual or challenging presentations of common diseases or common presentations of rare diseases where therapeutic strategies are critical.

Controversies:

This Plenary Session is designed to involve all PAS Congress attendees. Content is prepared to stimulate interest and debate among a panel of experts. Views from several angles will be addressed as discussion of pre-selected "hot" topics will be open for debate among the panelists.

Corporate Therapeutic Symposia:

These company-based informational sessions will provide attendees with non-CME educational opportunities to learn the latest in therapeutics and/or diagnostics.

Guided Poster Tours:

Guided Poster Tours will give small groups of delegates an opportunity to hear discussion on a select group of abstracts in several sub-categories.

Parallel Sessions:

These concurrent sessions provide an in-depth report of the latest research findings, state-of-the-art treatment options, as well as a discussion of future strategies. Parallel sessions will have evidence-based components and incorporate the "hot" issues in Parkinson's disease and other movement disorders.

Plenary Sessions:

These sessions provide a broad overview of the latest clinical and basic science research findings and state-of-the-art information.

Poster Sessions:

Poster sessions give each delegate an opportunity to view their colleagues' posters on the most current research in the field of Movement Disorders. Authors will be present for 90 minutes each day to explain their work and answer questions.

Skills Workshops:

These clinic-based training sessions provide an educational illustration of clinical techniques and treatment procedures through demonstrations utilizing patient videotapes and proper equipment to further develop practitioners' skills and knowledge within the field of treatment of movement disorders.

Video Sessions:

Designed to provide a broad overview of related movement disorders, the video sessions will focus on the phenomenology covering the many different kinds of movement disorders affecting the population today.

Faculty Roles

Speaker / Presenter:

Creates and delivers the presentation materials, and participates in the dialogue of the session.

Session Chair:

Facilitates the learnings of the session; ensures that learning objectives are met during the presentation(s), and engages the learners as needed.

Liaison:

Develops the session from the onset and provides guidance to ensure that the overall objectives are met.

2ND PAS CONGRESS THEME:

The PAS Congress Scientific Program Committee has selected a theme that is highlighted throughout the meeting. This year's theme, *Movement Disorders Across the Americas: Translating Science to Clinical Practice,* will be showcased in two Plenary Sessions, one Parallel Session and one Skills Workshop. Themed sessions are designated in the program with a .

Friday, June 22, 2018

1101 Themed Plenary Session

Cognition and Neuropsychiatric Symptoms in Parkinson's Disease: What's New in the Americas
8:00 – 9:45

Location: Symphony I&II
Chairs: Cynthia Comella, *USA*
Henrique Ferraz, *Brazil*

8:00 Genetic Influences on Cognitive Function
Ignacio Mata, *USA*

8:35 Neuroimaging, Cognition, and Neuropsychiatric Symptoms
Antonio Strafella, *Canada*

9:10 Emerging Clinical and Therapeutic Targets
Jennifer Goldman, *USA*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/ Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Discuss how genetics influence cognitive function in Parkinson's disease, including findings from the Latin American Research Consortium on the Genetics of Parkinson's Disease
2. Identify neuroimaging changes associated with cognitive impairment and neuropsychiatric features of Parkinson's disease, highlighting work in the Americas
3. Describe novel therapeutic targets for cognition and neuropsychiatric symptoms of Parkinson's disease, emphasizing new avenues in the Americas

Liaison: Jennifer Goldman, *USA*

1102 Plenary Session

A Universe in Expansion: Ataxias in the Americas
10:15 – 12:00

Location: Symphony I&II
Chairs: Joseph Jankovic, *USA*
Anthony Lang, *Canada*

10:15 The Geographic Diversity of Spinocerebellar Ataxias in the Americas
Hélio Teive, *Brazil*

10:50 Autosomal Recessive Ataxias in the Americas
Nicolas Dupré, *Canada*

11:25 Hope for Effective Therapy of Hereditary Ataxias
Henry Paulson, *USA*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/ Residents/Trainees

1102 Plenary Session, cont.

At the conclusion of this session, participants should be better able to:
1. Describe the geographic diversity of spinocerebellar ataxias in the Americas
2. Describe the clinical phenotype of the most common causes of autosomal recessive ataxias in the Americas
3. List the new therapeutic developments of hereditary ataxias

Liaison: Francisco Cardoso, *Brazil*

1203 Themed Parallel Session

Movement Disorders of the Caribbean
14:30 – 16:30

Location: Symphony I
Chairs: Jose Ricardo Lopez-Contreras, *El Salvador*
Henry Paulson, *USA*

14:30 Guadeloupe: Atypical Parkinsonism
Annie Lannuzel, *Guadeloupe*

15:10 Spinocerebellar Ataxias in the Caribbean
Tania Cruz Marino, *Canada*

15:50 Drug-Induced Movement Disorders in the Caribbean
Carlos Singer, *USA*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/ Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Identify pathogenic mechanisms in movement disorders seen in particular geographic settings
2. Recognize the variety of clinical presentation of atypical regional movement disorders; such as the Holguín SCA2 Cluster
3. Translate pathophysiology of uncommon movement disorders to more prevalent diseases

Liaison: William Fernandez, *Colombia*

1204 Parallel Session

Mild Cognitive Impairment in Parkinson's Disease
14:30 – 16:30

Location: Symphony II
Chairs: Jennifer Goldman, *USA*
Ignacio Mata, *USA*

14:30 Cognitive Change in Early Parkinson's Disease
Daniel Weintraub, *USA*

15:10 Novel Markers of Cognitive Decline
Agustin Ibanez, *Argentina*

15:50 Interventions for Mild Cognitive Impairment
Richard Camicioli, *Canada*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/ Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Describe the clinical features and neurobiological changes that may underlie cognitive changes in early Parkinson's disease
2. Examine novel markers of cognitive change in Parkinson's disease including alterations in linguistics and other functions
3. Discuss pharmacological and non-pharmacological interventions for mild cognitive impairment, including physical and cognitive exercise, in Parkinson's disease

Liaison: Jennifer Goldman, *USA*

1205 Parallel Session

Recent Advances in the Therapy of Motor Symptoms of Parkinson's Disease
14:30 – 16:30

Location: Symphony III
Chairs: Henrique Ferraz, *Brazil*
Oscar Gershanik, *Argentina*

14:30 Strategies for Motor Fluctuations
Peter LeWitt, *USA*

15:10 Novel Approaches to Dyskinesia
Susan Fox, *Canada*

15:50 Managing Gait Disturbances
John Nutt, *USA*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/ Residents/Trainees

Friday, June 22, 2018

1205 Parallel Session, cont.

At the conclusion of this session, participants should be better able to:

1. Discuss new strategies for continuous dopaminergic treatment
2. Describe emerging approaches to treatment of wearing off and dyskinesias
3. Describe pharmacological and non-pharmacologic approaches to treatment of gait disturbances in Parkinson's disease

Liaison: David Standaert, *USA*

1206 Parallel Session

Therapeutic Update: Hyperkinetic Disorders
14:30 – 16:30

Location: Symphony IV
Chairs: Veronica Bruno, *Argentina*
Mark Hallett, *USA*

14:30 Tics
Oksana Suchowersky, *Canada*

15:10 Myoclonus
Mayela Rodriguez Violante, *Mexico*

15:50 Tardive Dyskinesia
Cynthia Comella, *USA*

Recommended Audience: Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:

1. Formulate management strategies for patients with tic disorders
2. Recognize the different therapeutic approaches to myoclonus
3. Describe treatments for tardive dyskinesia; new and old

Liaison: Mayela Rodriguez Violante, *Mexico*

1307 Themed Skills Workshop

How to Pursue a Career in Movement Disorders: Educational Opportunities in the Americas
17:00 – 18:30

Location: Symphony I
Charles Adler, *USA*
Brandon Barton, *USA*
Thiago Cardoso Vale, *Brazil*

Recommended Audience: Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:

1. Recognize the existing opportunities for movement disorders training throughout the Americas
2. Describe the obstacles and limitations for those interested in following a career path in Movement Disorders
3. Discuss the Educational Roadmap offered by MDS towards building a personalized curriculum in Movement Disorders

Liaison: Oscar Gershanik, *USA*

1308 Skills Workshop

Infusion Therapies for Advanced Parkinson's Disease
17:00 – 18:30

Location: Symphony II
Marcelo Merello, *Argentina*
David Standaert, *USA*

Recommended Audience: Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:

1. Explain the use of continuous infusion of apomorphine and L-dopa gel for advanced Parkinson's disease patients
2. Recognize different alternatives to DBS for severe fluctuating patients
3. Summarize the practical issues of continuous infusion delivery

Liaison: Marcelo Merello, *Argentina*

1309 Video Session

Autoimmune Movement Disorders: Knowns and Unknowns
17:00 – 18:30

Location: Symphony III
Francisco Cardoso, *Brazil*
Harvey Singer, *USA*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:

1. Describe the phenomenology of autoimmune movement disorders
2. Summarize the mechanism of autoimmune movement disorders
3. Discuss the therapeutic options available for autoimmune movement disorders

Liaison: Francisco Cardoso, *Brazil*

1310 Skills Workshop

Neuroimaging in Parkinson's Disease and Atypical Parkinsonisms: New Frontiers
17:00 – 18:30

Location: Symphony IV
Cecilia Peralta, *Argentina*
A. Jon Stoessl, *Canada*

Recommended Audience: Basic scientists, Clinical academicians, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:

1. Define the current best practices of MRI, PET and spect use for diagnosis purpose
2. Describe how neuroimaging methods can help characterize Parkinson's disease and atypical Parkinsonism
3. Discuss the role of imaging receptors, proteinopathies and neuroinflammation in Parkinsonisms

Liaison: Marcelo Merello, *Argentina*

Saturday, June 23, 2018

2101 Themed Plenary Session

Huntington's Disease Across the Americas
8:00 – 9:45

Location: Symphony I&II
Chairs: William Fernandez, *Colombia*
Christopher Goetz, *USA*

8:00 Historical Landscape and the Importance of the Americas
Claudia Perandones, *Argentina*

8:35 New Advances in the Molecular, Anatomical and Neurophysiological Understanding of Huntington's Disease
Ignacio Muñoz-Sanjuán, *USA*

9:10 Clinical Trials Ongoing and Planned for the Future
Blair Leavitt, *Canada*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Describe the past and current Pan American efforts to advance the science of Huntington's disease
2. Explain new advances in the molecular, cellular and network understanding of Huntington's disease
3. List the new clinical trials current ongoing and planned for Huntington's disease patients in Pan America

Liaison: Christopher Goetz, *USA*

2102 Plenary Session

Dystonia: Present and Future
10:15 – 12:00

Location: Symphony I&II
Chairs: Hubert Fernandez, *USA*
Hyder Jinnah, *USA*

10:15 Genetics in Dystonia: Where Are We Now?
Laurie Ozelius, *USA*

10:50 Dystonia as a Network Disorder
Mark Hallett, *USA*

11:25 Research Priorities in Dystonia
Sarah Pirio-Richardson, *USA*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Describe the advances in the genetics of dystonia
2. Discuss the advances in knowledge of the underlying pathophysiology of dystonia
3. Describe new therapeutic approaches to dystonia

Liaison: Cynthia Comella, *USA*

2203 Parallel Session

Prodromal Parkinson's Disease
14:30 – 16:30

Location: Symphony I
Chairs: Orlando Barsottini, *Brazil*
Daniel Weintraub, *USA*

14:30 Anatomical Correlates of Prodromal Parkinson's Disease
Charles Adler, *USA*

15:10 Clinical Features of Prodromal Parkinson's Disease
Ron Postuma, *Canada*

15:50 Imaging Prodromal Parkinson's Disease
A. Jon Stoessl, *Canada*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Explain the anatomical basis for prodromal Parkinson's disease
2. Describe the clinical features of prodromal Parkinson's disease
3. Explain the utility of imaging in identifying prodromal Parkinson's disease

Liaison: David Standaert, *USA*

2204 Parallel Session

Non-Huntington Choreas
14:30 – 16:30

Location: Symphony II
Chair: Mayela Rodriguez Violante, *Mexico*
Victor Sung, *USA*

14:30 What If It's Not Huntington's Disease? Other Genetic Causes
Laura Jardim, *Brazil*

15:10 Non-Genetic Causes of Chorea
William Fernandez, *Colombia*

15:50 Management of Chorea: Therapeutic Options
Victor Sung, *USA*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Describe the clinical approach for the differential diagnosis of chorea including the adequate use of genetic testing
2. Identify other causes of non-genetic chorea including infectious autoimmune causes
3. Recognize currently available management strategies

Liaison: Mayela Rodriguez Violante, *Mexico*

2205 Parallel Session

MDS-EBM Update on Therapies for Movement Disorders
14:30 – 16:30

Location: Symphony III
Chairs: Brandon Barton, *USA*
Susan Fox, *Canada*

14:30 Treatments for Parkinson's Disease: Motor Issues
Joseph Jankovic, *USA*

15:10 Treatments for Parkinson's Disease: Non-Motor Issues
Veronica Bruno, *Argentina*

15:50 Treatments for Tremor and Treatments for RLS
Tiago Mestre, *Canada*

Recommended Audience: Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees\

At the conclusion of this session, participants should be better able to:
1. Describe the ranking methods of the MDS-EBMR program
2. Outline the efficacious treatments for Parkinson's disease, both motor and non-motor treatments
3. List the efficacious treatments for tremor and Restless Leg Syndrome

Liaison: Christopher Goetz, *USA*

Saturday, June 23, 2018

2206 Parallel Session

Beyond Traditional Deep Brain Stimulation
14:30 – 16:30

Location: Symphony IV
Chairs: Marcelo Merello, *Argentina*
Joohi Jimenez-Shahed, *USA*

14:30 New Approaches to Deep Brain Stimulation in Parkinson's Disease
Alfonso Fasano, *Canada*

15:10 Beyond GPi for Dystonia
Jill Ostrem, *USA*

15:50 Novel Use of Deep Brain Stimulation in Other Movement Disorders
Michael Okun, *USA*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Recognize the application of novel approaches to DBS in Parkinson's disease
2. Explain the use of DBS targets other than GPi in dystonia
3. Appreciate the novel application of DBS for other movement disorders besides Parkinson's disease and dystonia

Liaison: Jill Ostrem, *USA*

2307 Skills Workshop

Challenges to Publish Movement Disorders Research
17:00 – 18:30

Location: Symphony I
Christopher Goetz, *USA*
Marcelo Merello, *Argentina*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Recognize that the publication of research starts before writing a paper
2. Identify different ways of publishing their research
3. Discuss the most common style mistakes made when writing a paper

Liaison: Christopher Goetz, *USA*

2308 Video Session

Diagnosis and Differential Diagnosis of Dystonia
17:00 – 18:30

Location: Symphony II
Patricia Maria De Carvalho Aguiar, *Brazil*
Hyder Jinnah, *USA*

Recommended Audience: Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Recognize the features of isolated dystonia
2. Develop a differential diagnosis for atypical dystonia
3. Apply the MDS classification to dystonia cases

Liaison: Cynthia Comella, *USA*

2309 Skills Workshop

Deep Brain Stimulation Troubleshooting: Case-Based Approach
17:00 – 18:30

Location: Symphony III
Joohi Jimenez-Shahed, *USA*
Renato Puppi Munhoz, *Canada*

Recommended Audience: Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Recognize common challenges in the management of DBS patients
2. Discuss advanced DBS programming approaches in complex cases
3. Explain the strategies for troubleshooting DBS

Liaison: Jill Ostrem, *USA*

2310 Skills Workshop

Rehabilitation for Parkinson's Disease and Other Movement Disorders
17:00 – 18:30

Location: Symphony IV
Daniela Alburquerque, *Chile*
Terry Ellis, *USA*

Recommended Audience: Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Recognize the role of exercise in the rehabilitation of subjects with Parkinson's disease and/or other movement disorders
2. Identify the benefits of rehabilitation in improving speech and swallowing problems in subjects with Parkinson's disease and/or other movement disorders
3. Summarize existing rehabilitation approaches and their benefits for subjects with Parkinson's disease and/or other movement disorders

Liaison: Mayela Rodriguez Violante, *Mexico*

Challenging Case MDS-PAS Rounds

19:30 – 22:00

Location: Symphony I&II
Chair: Alberto Espay, *USA*
MDS EXPERTS:
Orlando Barsottini, *Brazil*
Anthony Lang, *Canada*
Michael Okun, *USA*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

Witness clinical experts present and discuss a case by phenomenology, syndromic classification and differential diagnosis

Sunday, June 24, 2018

3101 Plenary Session

Hot Topics in Movement Disorders
8:00 – 9:45

Location: Symphony I&II
Chairs: Mark Hallett, *USA*
Oksana Suchowersky, *Canada*

8:00 Cannabinoids in Movement Disorders
Benzi Kluger, *USA*

8:35 New Approaches to Gene Therapy: A Brave New World
Jeffrey Kordower, *USA*

9:10 Mechanisms Underlying Levodopa Induced Dyskinesia
Oscar Gershanik, *Argentina*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Describe and analyze the evidence for the use of cannabinoids in movement disorders
2. Identify and review the new technologies for genetic therapies
3. Explore the mechanisms underlying the development of dyskinesia and potential targets for therapeutic intervention

Liaison: Oksana Suchowersky, *Canada*

3102 Plenary Session

Controversies in Movement Disorders
10:15 – 12:00

Location: Symphony I&II
Chairs: Francisco Cardoso, *Brazil*
David Standaert, *USA*

10:15 Is Essential Tremor a Useful Concept?
YES
Joseph Jankovic, *USA*
NO
Rodger Elble, *USA*

10:50 Are We Ready for Precision Medicine in Parkinson's Disease?
YES
Haydeh Payami, *USA*
NO
Alberto Espay, *USA*

11:25 Can We Prevent Parkinson Disease?
YES
Caroline Tanner, *USA*
NO
Matthew Farrer, *Canada*

Recommended Audience: Basic scientists, Clinical academicians, Non-physician Health Professionals, Practitioners, Students/Residents/Trainees

At the conclusion of this session, participants should be better able to:
1. Discuss the utility of essential tremor as a concept
2. Review the potential benefit of precision medicine in the diagnosis and treatment of Parkinson's disease
3. Critique use of current knowledge about genetic and/or environmental causes of Parkinson's disease to prevent its development and/or progression

Liaison: Oksana Suchowersky, *Canada*

Faculty Listing

Charles Adler, *USA*
1307, 2203

Daniela Alburquerque, *Chile*
2310

Orlando Barsottini, *Brazil*
2203, Challenging Case MDS-PAS Rounds

Brandon Barton, *USA*
1307, 2205

Veronica Bruno, *Argentina*
1206, 2205

Richard Camicioli, *Canada*
1204

Francisco Cardoso, *Brazil*
1102, 1309, 3102

Cynthia Comella, *USA*
1101, 1206, 2102, 2308

Tania Cruz Marino, *Canada*
1203

Patricia De Carvalho Aguiar, *Brazil*
2308

Nicolas Dupré, *Canada*
1102

Rodger Elble, *USA*
3102

Terry Ellis, *USA*
2310

Alberto Espay, *USA*
3102, Challenging Case MDS-PAS Rounds

Matthew Farrer, *Canada*
3102

Alfonso Fasano, *Canada*
2206

Hubert Fernandez, *USA*
2102

William Fernandez, *Colombia*
1203, 2101, 2204

Henrique Ferraz, *Brazil*
1101, 1205

Susan Fox, *Canada*
1205, 2205

Oscar Gershanik, *Argentina*
1205, 1307, 3101

Christopher Goetz, *USA*
2101, 2205, 2307

Jennifer Goldman, *USA*
1101, 1204

Mark Hallett, *USA*
1206, 2102, 3101

Agustin Ibanez, *Argentina*
1204

Joseph Jankovic, *USA*
1102, 2205, 3102

Laura Jardim, *Brazil*
2204

Joohi Jimenez-Shahed, *USA*
2206, 2309

Hyder Jinnah, *USA*
2102, 2308

Benzi Kluger, *USA*
3101

Jeffrey Kordower, *USA*
3101

Anthony Lang, *Canada*
1102, Challenging Case MDS-PAS Rounds

Annie Lannuzel, *France*
1203

Blair Leavitt, *Canada*
2101

Peter LeWitt, *USA*
1205

Jose Lopez-Contreras, *El Salvador*
1203

Ignacio Mata, *USA*
1101, 1204

Marcelo Merello, *Argentina*
1308, 1310, 2206, 2307

Tiago Mestre, *Canada*
2205

Renato Munhoz, *Canada*
2309

Ignacio Muñoz-Sanjuán, *USA*
2101

John Nutt, *USA*
1205

Michael Okun, *USA*
2206, Challenging Case MDS-PAS Rounds

Jill Ostrem, *USA*
2206, 2309

Laurie Ozelius, *USA*
2102

Henry Paulson, *USA*
1102, 1203

Haydeh Payami, *USA*
3102

Maria Cecilia Peralta, *Argentina*
1310

Claudia Perandones, *Argentina*
2101

Sarah Pirio Richardson, *USA*
2102

Ron Postuma, *Canada*
2203

Mayela Rodriguez Violante, *Mexico*
1206, 2204, 2310

Carlos Singer, *USA*
1203

Harvey Singer, *USA*
1309

David Standaert, *USA*
1205, 1308, 2203, 3102

A. Jon Stoessl, *Canada*
1310, 2203

Antonio Strafella, *Canada*
1101

Oksana Suchowersky, *Canada*
1206, 3101, 3102

Victor Sung, *USA*
2204

Caroline Tanner, *USA*
3102

Helio Teive, *Brazil*
1102

Thiago Cardoso Vale, *Brazil*
1307

Daniel Weintraub, *USA*
1204, 2203

LIVE WELL DO TELL:

TAKING THE NEXT STEP IN THE MANAGEMENT OF PARKINSON'S DISEASE

Join a distinguished panel of clinicians:

RAJESH PAHWA, MD (Chair), Kansas City, KS, USA

CONNIE MARRAS, MD, PHD, Toronto, ON, Canada

CYNTHIA COMELLA, MD, PHD, Chicago, IL, USA

SATURDAY, JUNE 23, 2018

12:15 - 1:15

Lunch will be served.

VISIT BOOTH #13
FOR MORE INFORMATION

OFF PERIODS: A SHATTERING REALITY
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PD6334 04/18

VISIT BOOTH #9 TO FIND OUT HOW

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48.75 mg / 195 mg • 61.25 mg / 245 mg

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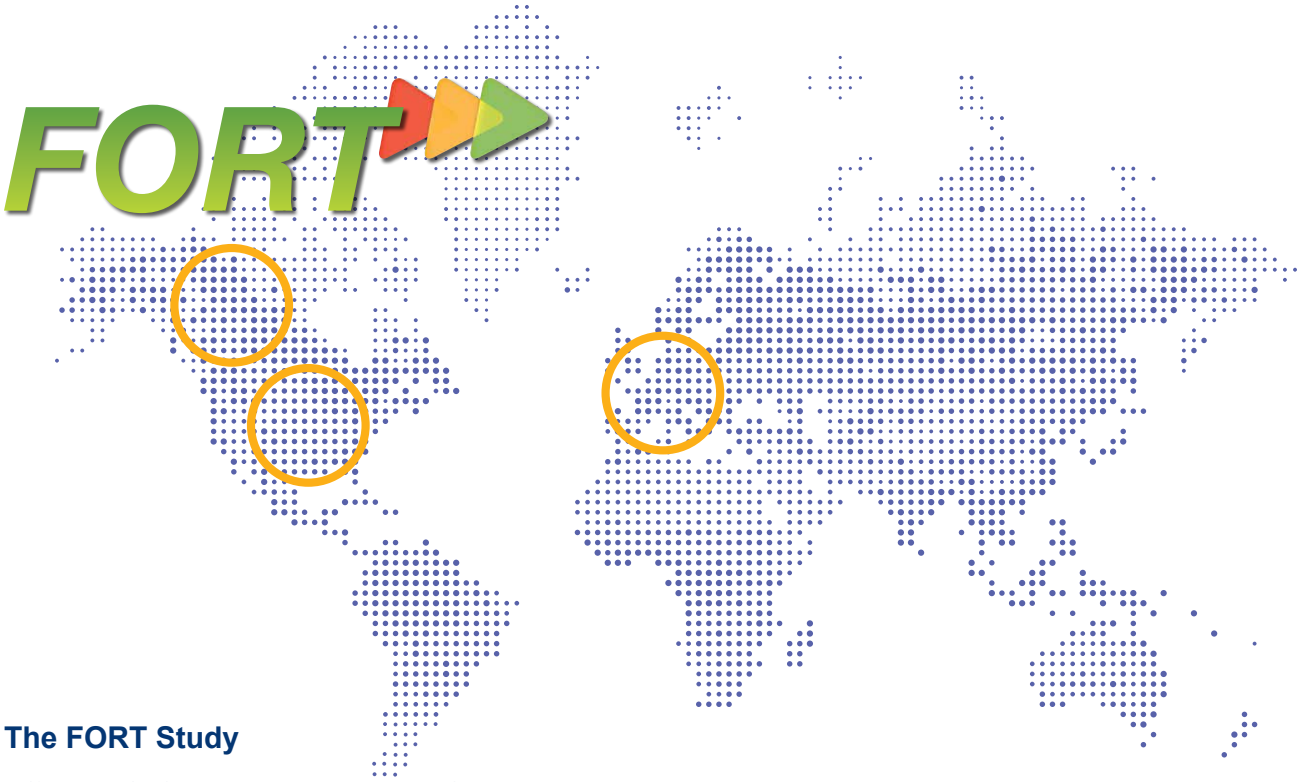
Give your PKAN patients an option to enroll in the FORT study.



The FORT Study

Efficacy, Safety, and Tolerability of Fosmetpantotenate: A Phase 3, Randomized, 24-Week, Double-Blind, Placebo-Controlled Study with an Open-label Extension

Key Inclusion Criteria:

- Confirmed *PANK2* gene mutation*
- Score of ≥6 on the PKAN-specific Activities of Daily Living (PKAN-ADL) scale**
- Ages 6 to 65 years old
- Ability to attend multiple visits over 24 weeks (study-related travel expenses will be covered)

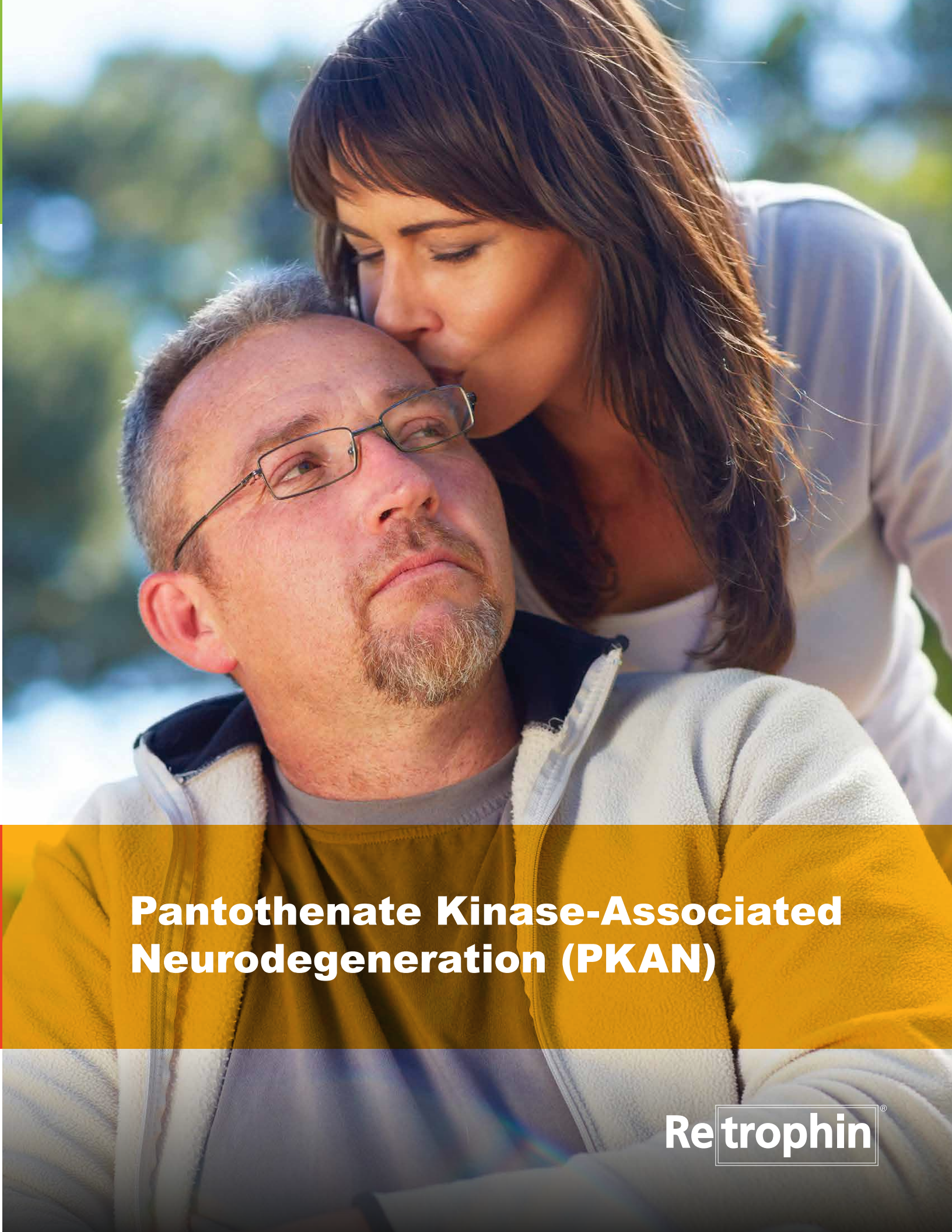
This study is being conducted in the United States, Europe, and Canada.

The most common NBIA (Neurodegeneration with Brain Iron Accumulation)

To learn more, visit **pkanfortstudy.com** or call **1-844-363-1866**.

*Genetic test results will determine study eligibility during pre-screening.

**Marshall R, Collins A, Escolar M, et al. Mov Disord 2017; 32 (suppl 2).



Pantothenate Kinase-Associated Neurodegeneration (PKAN)

Retrophin®

Addressing Dyskinesia in People with Parkinson's Disease

It's About Time

Corporate Therapeutic Update from Adamas Pharmaceuticals, Inc.

June 23, 12:15-1:15 pm • Hilton Miami Downtown — Symphony IV • 1601 Biscayne Blvd, Miami, FL 33132

COMPLIMENTARY LUNCH WILL BE SERVED

GOCOVRI™ (AMANTADINE) EXTENDED RELEASE CAPSULES IS THE FIRST AND ONLY MEDICINE APPROVED BY THE FDA FOR THE TREATMENT OF DYSKINESIA IN PATIENTS WITH PARKINSON'S DISEASE RECEIVING LEVODOPA-BASED THERAPY, WITH OR WITHOUT CONCOMITANT DOPAMINERGIC MEDICATIONS.

At this program, you and your colleagues will:

- Understand the impact of dyskinesia in people with Parkinson's disease (PD)
- Learn how GOCOVRI achieved significant and clinically relevant reductions in dyskinesia compared with placebo at 12 weeks in 2 pivotal trials, without modifying baseline levodopa utilization
- Discuss the key secondary benefits of GOCOVRI[a]
  - — Significant decrease in OFF time
  - — Significant gain in ON time without troublesome dyskinesia (functional time)
- Review the safety profile of GOCOVRI and its recommended administration

[a]Results derived from PD home diary data.

IMPORTANT SAFETY INFORMATION

CONTRAINDICATIONS

GOCOVRI is contraindicated in patients with creatinine clearance below 15 mL/min/1.73 m^2.

WARNINGS AND PRECAUTIONS

Falling Asleep During Activities of Daily Living and Somnolence: Patients treated with Parkinson's disease medications have reported falling asleep during activities of daily living. If a patient develops daytime sleepiness during activities that require full attention (e.g., driving a motor vehicle, conversations, eating), GOCOVRI should ordinarily be discontinued or the patient should be advised to avoid potentially dangerous activities.

Suicidality and Depression: Monitor patients for depression, including suicidal ideation or behavior. Prescribers should consider whether the benefits outweigh the risks of treatment with GOCOVRI in patients with a history of suicidality or depression.

Hallucinations/Psychotic Behavior: Patients with a major psychotic disorder should ordinarily not be treated with GOCOVRI because of the risk of exacerbating psychosis. Observe patients for the occurrence of hallucinations throughout treatment, especially at initiation and after dose increases.

Dizziness and Orthostatic Hypotension: Monitor patients for dizziness and orthostatic hypotension, especially after starting GOCOVRI or increasing the dose.

Withdrawal-Emergent Hyperpyrexia and Confusion: Rapid dose reduction or abrupt discontinuation of GOCOVRI may cause an increase in the symptoms of Parkinson's disease or cause delirium, agitation, delusions, hallucinations, paranoid reaction, stupor, anxiety, depression, or slurred speech. Avoid sudden discontinuation of GOCOVRI.

Impulse Control/Compulsive Behaviors: Patients may experience urges (e.g., gambling, sexual, money spending, binge eating) and the inability to control them. It is important for prescribers to ask patients or their caregivers about the development of new or increased urges. Consider dose reduction or stopping medications.

ADVERSE REACTIONS

The most common adverse reactions (>10%) were hallucination, dizziness, dry mouth, peripheral edema, constipation, fall, and orthostatic hypotension.

DRUG INTERACTIONS

Other Anticholinergic Drugs: The dose of GOCOVRI should be reduced if atropine-like effects are observed.

Drugs Affecting Urinary pH: The pH of the urine has been reported to influence the excretion rate of amantadine. Monitor for efficacy or adverse reactions under conditions that alter the urine pH.

Alcohol: Concomitant use with alcohol is not recommended, as it may increase the potential for CNS effects such as dizziness, confusion, lightheadedness, and orthostatic hypotension.

Please see brief summary on the following page.

ONCE DAILY AT BEDTIME

GOCOVRI™

(amantadine) extended release capsules

68.5 mg | 137 mg

This promotional, non-CME program is intended only for healthcare professionals involved in the treatment of dyskinesia in patients with Parkinson's disease.

GOCOVRI™ (amantadine) extended release capsules

Brief Summary of full Prescribing Information. See full Prescribing Information. Rx Only.

INDICATIONS AND USAGE: GOCOVRI is indicated for the treatment of dyskinesia in patients with Parkinson's disease receiving levodopa-based therapy, with or without concomitant dopaminergic medications.

CONTRAINDICATIONS: Contraindicated in patients with creatinine clearance below 15 mL/min/1.73 m^2

WARNINGS AND PRECAUTIONS:

Falling Asleep During Activities of Daily Living and Somnolence: Patients treated with Parkinson's disease medications have reported falling asleep while engaged in activities of daily living, including the operation of motor vehicles, which sometimes has resulted in accidents. Patients may not perceive warning signs, such as excessive drowsiness, or they may report feeling alert immediately prior to the event. In controlled clinical trials, somnolence and fatigue were reported in 4% vs. 1% of patients treated with GOCOVRI or placebo, respectively. Before initiating treatment with GOCOVRI, advise patients of the potential to develop drowsiness and specifically ask about factors that may increase the risk for somnolence with GOCOVRI, such as concomitant sedating medications or the presence of a sleep disorder. If a patient develops daytime sleepiness or episodes of falling asleep during activities that require full attention (e.g., driving a motor vehicle, conversations, eating), GOCOVRI should ordinarily be discontinued. If a decision is made to continue GOCOVRI, patients should be advised not to drive and to avoid other potentially dangerous activities. There is insufficient information to establish that dose reduction will eliminate episodes of falling asleep while engaged in activities of daily living or daytime somnolence.

Suicidality and Depression: In controlled clinical trials, suicidal ideation or suicide attempt was reported in 2% vs. 0%; depression or depressed mood 6% vs. 1%; confusional state 3% vs. 2%; apathy 2% vs. 0%, in patients treated with GOCOVRI or placebo, respectively. Monitor patients for depression, including suicidal ideation or behavior. Prescribers should consider whether the benefits outweigh the risks of treatment with GOCOVRI in patients with a history of suicidality or depression.

Hallucinations/Psychotic Behavior: Patients with a major psychotic disorder should ordinarily not be treated with GOCOVRI because of the risk of exacerbating psychosis.
In controlled trials, the incidence of patients who experienced visual hallucination, auditory hallucination, delusions, illusions, or paranoia was 25% vs 3%; hallucinations caused discontinuation of treatment in 8% vs.0%; in patients treated with GOCOVRI or placebo, respectively. Observe patients for the occurrence of hallucinations throughout treatment, especially at initiation and after dose increases.

Dizziness and Orthostatic Hypotension: In controlled clinical trials, 29% vs. 2% experienced dizziness, syncope, orthostatic hypotension, presyncope, postural dizziness or hypotension; and 3% vs. 0% discontinued study treatment because of dizziness, postural dizziness, or syncope; in patients receiving GOCOVRI or placebo, respectively. Monitor patients for dizziness and orthostatic hypotension, especially after starting GOCOVRI or increasing the dose. Concomitant use of alcohol with GOCOVRI is not recommended.

Withdrawal-Emergent Hyperpyrexia and Confusion: A symptom complex resembling neuroleptic malignant syndrome (characterized by elevated temperature, muscular rigidity, altered consciousness, and autonomic instability), with no other obvious etiology, has been reported in association with rapid dose reduction, withdrawal of, or changes in drugs that increase central dopaminergic tone. Abrupt discontinuation of GOCOVRI may cause an increase in the symptoms of Parkinson's disease or cause delirium, agitation, delusions, hallucinations, paranoid reaction, stupor, anxiety, depression, or slurred speech. If possible, avoid sudden discontinuation of GOCOVRI.

Impulse Control/Compulsive Behaviors: Patients can experience intense urges to gamble, increased sexual urges, intense urges to spend money, binge eating, and/or other intense urges, and the inability to control these urges while taking one or more of the medications, including GOCOVRI, that increase central dopaminergic tone. In some cases, these urges were reported to have stopped when the dose was reduced or the medication was discontinued. Because patients may not recognize these behaviors as abnormal, it is important for prescribers to specifically ask patients or their caregivers about the development of such urges, and to consider dose reduction or stopping GOCOVRI treatment.

ADVERSE REACTIONS:

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice. GOCOVRI was evaluated in two double-blind, placebo-controlled efficacy trials of similar design and population: Study 1 (123 patients) and Study 2 (75 patients). The study population was approximately 56% male and 94% white, with a mean age of 65 years (age range from 34 years to 82 years). The mean duration of levodopa-induced dyskinesia was 4 years (range 0.1 to 14 years). Active treatment started at 137 mg once daily for one week, followed by a dose increase to 274 mg once daily. The treatment duration was 25 weeks for Study 1 and 13 weeks for Study 2. Study 1 was stopped prematurely unrelated to safety, with 39/100 patients (safety population) treated with GOCOVRI for 24 weeks. The most common adverse reactions reported in >10% of GOCOVRI-treated patients and more frequently than on placebo were: hallucination, dizziness, dry mouth, peripheral edema, constipation, falls, and orthostatic hypotension. The overall rate of discontinuation because of adverse reactions was 20% vs. 8% for patients treated with GOCOVRI or placebo, respectively. Adverse reactions that led to treatment discontinuation in at least 2% of patients were hallucination (8% GOCOVRI vs. 0% placebo), dry mouth (3% GOCOVRI vs. 0% placebo), peripheral edema (3% GOCOVRI vs. 0% placebo), blurred vision (GOCOVRI 3% vs.0% placebo), postural dizziness and syncope (GOCOVRI 2% vs. 0% placebo), abnormal dreams (GOCOVRI 2% vs. 1% placebo), dysphagia (GOCOVRI 2% vs. 0% placebo), and gait disturbance (GOCOVRI 2% vs. 0% placebo). Pooled Analysis of Adverse Reactions Reported for ≥ 3% of Patients Treated with GOCOVRI 274 mg (N=100) or placebo (N=98), respectively: **Psychiatric disorders:** visual and/or auditory hallucination (21%, 3%); anxiety and/or generalized anxiety (7%, 3%); insomnia (7%, 2%); depression/depressed mood (6%, 1%); abnormal dreams (4%, 2%); confusional state (3%, 2%). **Nervous system disorders:** dizziness (16%, 1%); headache (6%, 4%); dystonia (3%, 1%). **Gastrointestinal disorders:** dry mouth (16%, 1%); constipation (13%, 3%); nausea (8%, 3%); vomiting (3%, 0%). **General disorders and administration site conditions:** peripheral edema (16%, 1%); gait disturbance (3%, 0%). **Injury, poisoning and procedural complications:** fall (13%, 7%); contusion (6%, 1%). **Infection and infestations:** urinary tract infection (10%, 5%). **Skin and subcutaneous tissue disorders:** livedo reticularis (6%, 0%); pigmentation disorder (3%, 0%). **Metabolism and nutrition disorders:** decreased appetite (6%, 1%). **Vascular disorders:** orthostatic hypotension, including postural dizziness, syncope, presyncope, and hypotension (13%, 1%). **Eye disorders:** blurred vision (4%, 1%); cataract (3%, 1%); dry eye (3%, 0%). **Musculoskeletal and connective tissue disorders:** joint swelling (3%, 0%), muscle spasm (3%, 0%). **Reproductive system and breast disorders:** benign prostatic hyperplasia—all male (6%, 2%). **Respiratory, thoracic and mediastinal disorders:** cough (3%, 0%) Other clinically relevant adverse reactions observed at <3% included somnolence, fatigue, suicide ideation or attempt, apathy, delusions, illusions, and paranoia. *Difference in the Frequency of Adverse Reactions by Gender in Patients Treated with GOCOVRI* Adverse reactions reported more frequently in women (n=46) vs. men (n=54), were: dry mouth (22% vs.11%), nausea (13% vs. 4%), livedo reticularis (13% vs. 0%), abnormal dreams (9% vs. 0%) and cataracts (7% vs. 0%), respectively. Men vs. women reported the following adverse reactions more frequently: dizziness (20% vs. 11%), peripheral edema (19% vs. 11%), anxiety (11% vs. 2%), orthostatic hypotension in (7% vs. 2%) and gait disturbance (6% vs. 0%), respectively. *Difference in the Frequency of Adverse Reactions by Age in Patients Treated with GOCOVRI* Hallucinations (visual or auditory) were reported in 31% of patients age 65 years and over (n=52), vs.10 % in patients below the age of 65 years (n=48). Falls were reported in 17% of patients age 65 and over, vs. 8% of patients below age 65. Orthostatic hypotension was reported in 8% of patients age 65 and over, compared to 2% of patients below age 65.

DRUG INTERACTIONS:

Other Anticholinergic Drugs: Products with anticholinergic properties may potentiate the anticholinergic-like side effects of amantadine. The dose of anticholinergic drugs or of GOCOVRI should be reduced if atropine-like effects appear when these drugs are used concurrently.

Drugs Affecting Urinary pH: The pH of the urine has been reported to influence the excretion rate of amantadine. Urine pH is altered by diet, drugs (e.g., carbonic anhydrase inhibitors, sodium bicarbonate), and clinical state of the patient (e.g., renal tubular acidosis or severe infections of the urinary tract). Since the excretion rate of amantadine increases rapidly when the urine is acidic, the administration of urine acidifying drugs may increase the elimination of the drug from the body. Alterations of urine pH towards the alkaline condition may lead to an accumulation of the drug with a possible increase in adverse reactions. Monitor for efficacy or adverse reactions under conditions that alter the urine pH to more acidic or alkaline, respectively.

Live Attenuated Influenza Vaccines: Due to its antiviral properties, amantadine may interfere with the efficacy of live attenuated influenza vaccines. Therefore, live vaccines are not recommended during treatment with GOCOVRI. Inactivated influenza vaccines may be used, as appropriate.

Alcohol: Concomitant use with alcohol is not recommended, as it may increase the potential for CNS effects such as dizziness, confusion, lightheadedness, and orthostatic hypotension, and may result in dose-dumping.

USE IN SPECIFIC POPULATIONS:

Pregnancy: There are no adequate data on the developmental risk associated with use of amantadine in pregnant women. Based on animal data, may cause fetal harm.

Lactation: Amantadine is excreted into human milk, but amounts have not been quantified. There is no information on the risk to a breastfed infant. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for GOCOVRI and any potential adverse effects on the breastfed infant from GOCOVRI or from the underlying maternal condition.

Pediatric Use: Safety and effectiveness of GOCOVRI in pediatric patients have not been established.

Geriatric Use: In Phase 3 clinical trials, the mean age of patients at study entry was 65 years. Of the total number of patients in clinical studies of GOCOVRI, 46% were less than 65 years of age, 39% were 65-74 years of age, and 15% were 75 years of age or older. Hallucinations and falls occurred more frequently in patients 65 years of age or older, compared to those less than 65 years of age. No dose adjustment is recommended on the basis of age. GOCOVRI is known to be substantially excreted by the kidney, and the risk of adverse reactions may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection, and it may be useful to monitor renal function.

Renal Impairment: GOCOVRI is contraindicated for use in patients with end-stage renal disease (creatinine clearance values lower than 15 mL/min/1.73 m^2). A 50% dose reduction of GOCOVRI dosage to a starting daily dose of 68.5 mg daily for a week, followed by a daily maintenance dose of 137 mg is recommended in patients with moderate renal impairment (creatinine clearance between 30 and 59 mL/min/1.73 m^2). For patients with severe renal impairment (creatinine clearance between 15 and 29 mL/min/m^2), a daily dose of 68.5 mg is recommended.

Overdosage: Deaths have been reported from overdose with amantadine immediate-release. The lowest reported acute lethal dose was 1 gram of amantadine hydrochloride (equivalent to 0.8 g amantadine). Acute toxicity may be attributable to the anticholinergic effects of amantadine. Drug overdose has resulted in cardiac, respiratory, renal, or central nervous system toxicity. Pulmonary edema and respiratory distress (including adult respiratory distress syndrome, ARDS) have been reported with amantadine; renal dysfunction, including increased BUN and decreased creatinine clearance, can occur. Central nervous system effects that have been reported with overdose include agitation, aggressive behavior, hypertonia, hyperkinesia, ataxia, tremor, disorientation, depersonalization, fear, delirium, psychotic reactions, lethargy, and coma. Seizures may be exacerbated in patients with prior history of seizure disorders. Hyperthermia has occurred with amantadine overdose. For acute overdosing, general supportive measures should be employed along with immediate gastric decontamination if appropriate. Give intravenous fluids if necessary. The excretion rate of amantadine increases with acidification of urine, which may increase the elimination of the drug. Monitor patients for arrhythmias and hypotension. Electrocardiographic monitoring may be needed after ingestion because arrhythmias have been reported after overdose, including arrhythmias with fatal outcomes. Adrenergic agents, such as isoproterenol, in patients with an amantadine overdose has been reported to induce arrhythmias. Monitor blood electrolytes, urine pH, and urinary output. Although amantadine is not efficiently removed by hemodialysis, this procedure may be useful in the treatment of amantadine toxicity in patients with renal failure.

PAS Congress

Corporate Therapeutic Symposium Hosted by ACADIA Pharmaceuticals Inc.

Saturday, June 23, 2018
6:45 AM - 7:45 AM
Breakfast to be served

Your name, the purpose, and the value of any educational item or meal will be reported as required by state and federal law.

Spotlight on Serotonin:
Serotonin Dysfunction in Parkinson's Disease and Psychosis

LOCATION

Hilton Miami Downtown
1601 Biscayne Blvd., Miami, FL 33132
Room: Symphony IV

Daniel E. Kremens, MD, JD
Associate Professor of Neurology
Co-Director
Parkinson's Disease & Movement Disorders
Department of Neurology
Sidney Kimmel Medical College
Thomas Jefferson University Philadelphia, PA

Rajesh Pahwa, MD
Professor
Department of Neurology
Director
Parkinson's Disease and Movement Disorder Center
University of Kansas School of Medicine
Kansas City, KS

LEARNING OBJECTIVES

- Explore the role of serotonin dysfunction in the pathology of Parkinson's disease (PD) and Parkinson's disease psychosis (PDP)
- Understand the theoretical basis for psychosis
- Examine the evidence for the role of 5-HT_{2A} in PDP
- Review the proposed mechanism of disease for PDP
- Consider antipsychotic receptor pharmacology in the context of PDP
- Discuss the impact of PDP on patients and caregivers

SEATING IS AVAILABLE ON A FIRST-COME, FIRST-SERVED BASIS; NO PRE-REGISTRATION REQUIRED

Award Information

2018 MDS-PAS LEADERSHIP AWARD

In recognition as an outstanding leader and contributor in the field of Movement Disorders within the MDS-Pan American Section, the PAS Congress Scientific Program Committee is pleased to honor Dr. Oscar Gershanik, MD, with the 2018 MDS-PAS Leadership Award.

Dr. Gershanik is Professor and Scientific Director of the Institute of Neuroscience at Favaloro Foundation University Hospital in Buenos Aires, Argentina. He is also the Director of the Movement Disorder Unit at the same institution and Director of the Laboratory of Experimental Parkinsonism, a basic research laboratory, at the Institute of Pharmacological Research under the jurisdiction of the National Council for Scientific Research and Technology and the University of Buenos Aires, Argentina.

From 2001 to 2008 he was Professor & Chairman of the Department of Neurology, Centro Neurologico-Hospital Frances. Buenos Aires. Until 2012 he was Professor of Neurology at the School of Medicine, University of Buenos Aires.

Dr. Gershanik received medical training at the University of Buenos Aires where he graduated "Magna Cum Laude", and did his post-graduate neurology training at the French Hospital in Buenos Aires, under the mentorship of Prof. Alfred Thomson. He completed a Parkinson's Disease and movement disorders fellowship, at Mount Sinai Hospital in New York under Prof. Melvin Yahr, and later on was invited as Associate Professor of Neurology and Pharmacology, in the Neurology Department of the University of New Jersey Rutgers Medical School under Prof. Roger Duvoisin. His research interests have been focused, since early in his career, on the study of dopamine receptors interactions, on trophic mechanisms induced by levodopa therapy in animal models of Parkinson's disease, and lately on plastic and molecular changes underlying the development of levodopa-induced dyskinesias; and has published extensively on those topics. Dr. Gershanik is and has always been actively involved in clinical practice in the field of Movement Disorders and teaching, both at the undergraduate and post-graduate level, having trained numerous young neurologists, both from Argentina and abroad in the field of Movement Disorders.

Dr. Gershanik has lectured extensively, both locally and abroad, and actively participates at the international level. He has been, for many years, involved in different capacities within the International Parkinson & Movement Disorder Society (MDS), and served as President of The Society from June of 2015 until 2017. He currently serves as MDS Leadership as an Officer and Past-President of The Society.

Award Information

2ND PAS CONGRESS TRAVEL GRANT AWARD RECIPIENTS

Lorena Almeida, Brazil
Lucia Ameghino, Argentina
Julieta Arena, Argentina
Kenia Arredondo Blanco, Ecuador
Maria Avalle, Argentina
Eduarda Barbosa, Brazil
Lorena Barcelos, Brazil
Oscar Bernal-Pacheco, Colombia
Claudia Carricarte Naranjo, Cuba
Jesus Castro, Venezuela
Mario Cornejo-Olivas, Peru
Rossy Cruz Vicioso, Dominican Republic
Rubens Cury, Brazil
Gustavo Andres Da Prat de Magalhaes, Argentina
Anilu Daza Restrepo, Venezuela
Carolina De Oliveira Souza, Brazil
Juan Ferrario, Argentina
Michelle Ferreira, Brazil
Carina Franca, Brazil
Gustavo Franklin, Brazil
Lucas Garcia, Brazil
Rachel Guimaraes, Brazil
Marlene Huamani Mendoza, Peru
Camila Lirani-Silva, Brazil
Clarice Listik, Brazil
Jorge Llibre Guerra, Cuba
Bruno Lopes Dos Santos, Brazil
Ignacia Rosalia Martinez, Mexico
Viviana Martinez Villota, Colombia
Diana Murcia Rojas, Colombia
Jose Nasser, Brazil
Daniel Nassif, Brazil
Jorge Ortiz, Honduras
Natalia Ospina Garcia, Colombia
Jacy Parmera, Brazil
Maria Elisa Piemonte, Brazil
Helen Pola, Brazil
Sergio Rodriguez Quiroga, Argentina
Pamela Soledad Sacco, Argentina
Artur Schumacher Schuh, Brazil
Gabriel Silva, Brazil
Cinthia Terroba, Argentina
Martin Tourreilles, Argentina
Juan Vargas Jaramillo, Colombia
Yaimé Vázquez-Mojena, Cuba
Manuel Vides, El Salvador
Miguel Wilken, Argentina
Ashley Yearwood, Grenada
Lucia Zavala, Argentina

2ND PAS CONGRESS FELLOWSHIP SCHOLARSHIP RECIPIENTS

Mitra Afshari, USA
Norma Lizeth Alvarado Franco, Mexico
Sana Aslam, USA
Margarita Aveiga, Brazil
Annelise Ayres, Brazil
Caíssa Bezerra de Andrade, Brazil
Andre Borges Ferreira Gomes, Brazil
Ethan Brown, USA
Shivika Chandra, USA
María Eugenia Contreras Pinto, Chile
Alberto Cucca, USA
Marissa Dean, USA
Jose Armando Diaz Martinez, Mexico
Juan Manuel Genco, Argentina
Natalia Gonzalez Rojas, Argentina
Pavel Hernandez, Argentina
Elisa Libardi, Brazil
Oswaldo Lorenzo, USA
Robyn Massa, USA
Patricio Millar, Argentina
Kyle Mitchell, USA
Daniela Munoz, Chile
Lurdes Navarro, Mexico
Hwai Yin Ooi, USA
Juan Sebastián Saavedra, Colombia
Elison Sarapura, Peru
Sara Schaefer, Canada
Tauana Tironi, Brazil
Christopher Way, USA
Lorena Zuazua, Mexico

The 2nd PAS Congress Travel Grant Program was partially supported by an unrestricted grant from Dystonia Medical Research Foundation.

Poster Sessions

Poster sessions give each delegate an opportunity to view posters on the most current research in the field of Movement Disorders. Authors will be present for 90 minutes each day to explain their work and answer questions. All accepted abstracts are presented as a printed poster at the 2nd PAS Congress.

POSTER SESSION SCHEDULE

Friday, June 22, 2018

Poster Session: 13:00 - 14:30
Poster Viewing Hours: 9:00 – 17:00
Location: Concerto Ballroom

1-11	Ataxia
13-19	Drug-induced Movement Disorders
20-23	Education in Movement Disorders
24-30	Epidemiology
31-32	History
33-38	Huntington's Disease
39-42	Neuroimaging (Non-Parkinson's Disease)
43-48	Neuropharmacology
51-67	Parkinson's Disease: Clinical Trials, Pharmacology and Treatment
68-79	Parkinson's Disease: Cognition
80-88	Parkinson's Disease: Neuroimaging and Neurophysiology
89-97	Parkinson's Disease: Non-Motor Symptoms
98-99	Pediatric Movement Disorders
100-101	Quality of Life/Caregiver Burden in Movement Disorders
103-106	Rare Genetic and Metabolic Diseases
107-111	Rating Scales
112-113	Restless Legs Syndrome and Other Sleep Disorders
114-118	Spasticity
119-122	Tics/Stereotypies
123-128	Tremor

Saturday, June 23, 2018

Poster Session: 13:00 - 14:30
Poster Viewing Hours: 9:00 – 17:00
Location: Concerto Ballroom

129-133	Choreas (Non-Huntington's Disease)
134-141	Clinical Trials and Therapy in Movement Disorders
143-151	Dystonia
153-160	Huntington's Disease
161	Myoclonus
162-179	Other
180-187	Parkinsonism, MSA, PSP (Secondary and Parkinsonism-Plus)
188-206	Parkinson's Disease: Clinical Trials, Pharmacology and Treatment
207-214	Parkinson's Disease: Genetics
215-224	Parkinson's Disease: Non-Motor Symptoms
225-230	Parkinson's Disease: Pathophysiology
231-234	Parkinson's Disease: Psychiatric Manifestations
235-242	Phenomenology and Clinical Assessment of Movement Disorders
243-245	Surgical Therapy: Other Movement Disorders Technology
246-254	Surgical Therapy: Parkinson's Disease
255-256	Therapy in Movement Disorders: Gene and Cell-Based Therapies

Late-Breaking Abstracts will be presented from 13:00 – 14:30 on Saturday, June 23.

ABSTRACT PUBLICATION

All regular accepted abstracts are published as an electronic supplement to the *Movement Disorders* Journal, as of June 22, 2018. Please visit www.movementdisorders.org to access The *Movement Disorders* Journal, where you can download a PDF of accepted abstracts.

Late-Breaking Abstracts are published as an online PDF on the 2nd PAS Congress website and are available for download as of June 22, 2018.

Guided Poster Tours

Guided Poster Tour 1:

Friday, June 22, 2018—13:30-14:30

Location: Concerto Ballroom
Includes the top scoring abstracts in the following category
- Epidemiology

Leaders: Caroline Tanner and Tiago Mestre

Guided Poster Tour 2:

Friday, June 22, 2018—13:30-14:30

Location: Concerto Ballroom
Includes the top scoring abstracts in the following category
- Parkinson's Disease: Clinical Trials, Pharmacology and Treatment

Leaders: Susan Fox and Oscar Gershanik

Guided Poster Tour 3:

Saturday, June 23, 2018—13:30-14:30

Location: Concerto Ballroom
Includes the top scoring abstracts in the following category
- Dystonia

Leaders: Anthony Lang and Marcelo Merello

Guided Poster Tour 4:

Saturday, June 23, 2018—13:30-14:30

Location: Concerto Ballroom
Includes the top scoring abstracts in the following category
- Parkinson's Disease: Clinical Trials, Pharmacology and Treatment

Leaders: Joohi Jimenez-Shahed and Hubert Fernandez

Abstracts by Topic

ATAXIA

1 Diagnosis of Spinocerebellar Ataxia 3 (SCA3) in the West Indies
Ashley Yearwood, Ruth Walker, Shruthi Rethi, Karla Figueroa, Andrew Sobering (True Blue, Grenada)

2 Nuclear Anomalies and Genetic Polymorphism Associated to Patients with Spinocerebellar Ataxia Type 2
Dany Cuello-Almarales, Luis Almaguer-Mederos, Yaimé Vázquez-Mojena, Dennis Almaguer-Gotay, Pedro Zayas-Feria, José Laffita-Mesa, Yanetza González-Zaldívar, Raúl Aguilera-Rodríguez, Annelié Rodríguez-Estupiñán, Luis Velázquez-Pérez (Holguín, Cuba)

3 Osteoid Osteoma Presenting with Gait Ataxia
Juanette Mckenzie, Curtis Oettel-Flaherty, Douglass Noel, Ruth Walker, Andrew Sobering (St. George's, Grenada)

4 Update of the Predictive Diagnosis Program for SCA2 in Cuba: Challenges and Ethical Dilemmas
Yaimé Vázquez-Mojena, Tania Cruz Marino, Luis Velázquez-Pérez, Yanetza González-Zaldívar, Miguel Velazquez-Santos, Annelie Estupiñan-Rodriguez, Luis Almaguer-Mederos (Holguín, Cuba)

5 One-carbon Metabolism Factor MTHFR Variants are Associated with Disease Severity and Progression in Spinocerebellar Ataxia Type 2
Luis Almaguer-Mederos, Yasnay Jorge-Sainz, Dennis Almaguer-Gotay, Raúl Aguilera-Rodríguez, Yanetza González-Zaldívar, Dany Cuello-Almarales, Yaimé Vázquez-Mojena, Roberto Rodríguez-Labrada, Nalia Canales-Ochoa, Jorge Aguiar-Santiago, Luis Velázquez-Pérez, Patrick MacLeod, Georg Auburger (Holguin, Cuba)

6 SCN2A Mutation in a Family with Episodic Ataxia and Epilepsy: A Diagnosis with Therapeutic Implications
Sergio Rodriguez Quiroga, Patricia Vega, Dolores González Morón, Nancy Medina, Josefina Pérez Maturo, Ines Denzler, Nicolas Schnitzler, Guillermo Agosta, Marcelo Kauffman (Buenos Aires, Argentina)

7 Ataxin-2 Gene in the Cuban Population: Mutagenesis and Epigenetic DNA Methylation Influencing Disease Phenotype
Jose Laffita-Mesa, Luis Velázquez-Pérez (Stockholm, Sweden)

8 Late Onset Friedreich's Ataxia in Brazilian Siblings: Case Series of Spinocerebellar Ataxia Mimics
Gabriel Silva, Luiz Felipe Vasconcellos, Mariana Spitz (Rio de Janeiro, Brazil)

9 Relevance of Superior Vertical Ophthalmoparesis in the Diagnosis of Spinocerebellar Ataxia Type 3
Francisco Germiniani, Bruno Carniato Garcia, Fabio Nascimento, Marcia Olandoski, Helio Teive (Curitiba, Brazil)

10 Phenotypical Findings and Genotype-phenotype Correlation in a Brazilian Cohort of SCA 10 Patients
Francisco Germiniani, Bernardo Domingues, Fabio Nascimento, Adriana Moro, Salmo Raskin, Helio Teive, Tetsuo Ashizawa (Curitiba, Brazil)

11 Spinocerebellar Ataxia Type 2 with Infantile onset in Peru: A Case Report
Mario Cornejo-Olivas, Erick Figueroa-Ildefonso, Elison Sarapura-Castro, Karina Milla-Neyra, Lesly Solis-Ponce, Victoria Marca, Maryenela Illanes-Manrique, Miguel Inca-Martinez, Pilar Mazzetti (Lima, Peru)

12 Withdrawn by author

DRUG-INDUCED MOVEMENT DISORDERS

13 Lurasidone HCL Induced Tardive Dyskinesia: Two Cases
Richa Tripathi, Laura Scorr, Stewart Factor (Atlanta, GA, USA)

14 Withdrawn by author

15 Delayed Posthypoxic Leukoencephalopathy Involving U-47700: A Case Report and Literature Review
Shadi Barbu, Gina Hopkins, Michael Kuwabara (Phoenix, AZ, USA)

16 Biochemical and Neurochemical Evidences Indicating Potentiation in Neuroprotective Effect of Quercetin by Piperine against 6-OHDA Induced Parkinson's Like Symptoms in Experimental Rats
Shamsher Singh (Moga, India)

17 Amantadine-induced Speech Impairment in Parkinson's Disease
Guilherme Valenca, Mary Stefannie Wanderley, Lorena Almeida (Salvador, Brazil)

18 Effects of Long-Term Valbenazine on Tardive Dyskinesia and Patient-Reported Outcomes: Results from the KINECT 4 Study
Carlos Singer, Cynthia Comella, Jean-Pierre Lindenmayer, Khodayar Farahmand, Joshua Burke, Roland Jimenez, Scott Siegert (Miami, FL, USA)

19 Drug-Induced Movement Disorders in El Salvador (2004-2015)
Jose Ricardo Lopez-Castellanos (Cincinnnati, OH, USA)

EDUCATION IN MOVEMENT DISORDERS

20 Impact of a Visiting Movement Disorders Specialist in a Resource-limited Caribbean Island Community
Andrew Sobering, Ruth Walker (St. George's, Grenada)

21 The Adaptation of Card Games for Education in Movement Disorders
Sara Schaefer, Ana Vives-Rodriguez, IPMDS Young Members Group, Jeremy Moeller (Hamden, CT, USA)

22 Movement Disorders Video Curriculum for Neurology Clerkships and Residency Programs
Sagari Bette, Jason Margolesky, Corneliu Luca, Henry Moore, Carlos Singer, Yolanda Reyes Iglesias (Miami, FL, USA)

23 Perceptions of Neurology Trainees Regarding Parkinson's Disease
Shivika Chandra, Raja Mehanna, Mya Schiess (Houston, TX, USA)

EPIDEMIOLOGY

24 Chronic Degenerative Diseases and the Risk of Parkinson's Disease: A Case-control Study in Mexican Population
Marisa Escobar Barrios, Vanessa González-Hernánez, Christian Pérez-Lohman, Kenia Arredondo-Blanco, Natalia Ospina Garcia, Juan Diego Vargas-Jaramillo, Rosalía Zerón-Martínez, Amin Cervantes-Arriaga, Mayela Rodríguez-Violante (Aguascalientes, Mexico)

25 A Novel Approach to Identifying Advanced Parkinson's Disease in Administrative Claims Data
Nabila Dahodwala, Jordan Jahnke, Pengxiang Li, Vrushabh Ladage, Prasanna Kandukuri, Jorge Zamudio, Yash Jalundhwala, Jalpa Doshi (Philadelphia, PA, USA)

Abstracts by Topic

HISTORY

HUNTINGTON'S DISEASE

NEUROIMAGING (NON-PD)

NEUROPHARMACOLOGY

Abstracts by Topic

PARKINSON'S DISEASE: CLINICAL TRIALS, PHARMACOLOGY AND TREATMENT

49 Withdrawn by author

50 Withdrawn by author

51 Real World Assessment of "OFF" Episode Related Health Resource Use among Patients with Parkinson's Disease
Krithika Rajagopalan, Jonathan Barton, James Pike (Marlborough, MA, USA)

52 Real World Assessment of the Effect of "OFF" Episodes on Patient Quality of Life among Patients with Parkinson's Disease
Krithika Rajagopalan, Jonathan Barton, James Pike (Marlborough, MA, USA)

53 Evidence of Auditory Motor Entrainment Across Effector Systems: A Randomized Controlled Study with Parkinson's Disease Patients
Marion Haase, Thenille Braun Janzen, Michael Thaut (Riverview, FL, USA)

54 A Single Time Oral Administration of Nilotinib Significantly Alters the Level of Parkinson's Disease Biomarkers: An Interim Analysis
Fernando Pagan, Michaeline Hebron, Yasar Torres-Yaghi, Abigail Lawler, Nathan Starr, Barbara Wilmarth, Myrna Arellano, Margo Peyton, Elizabeth Mundel, Nadia Yusuf, Ashot Shekoyan, Jaeil Ahn, Charbel Moussa (Washington, DC, USA)

55 Withdrawn by author

56 A Short-period of Physical Activity Using Exergames was able to Promote Improvements in Endurance of People Living with Parkinson's Disease
Pâmela Yuki Barbosa, Amarílis Falconi, Kátia Kawai, Aline Carvalho de Almeida, Erika Okamoto, Erica Neves Guelfi, Matheus D'Alencar, Maria Elisa Piemonte (São Paulo, Brazil)

57 Role of DUOPA™ (carbidopa and levodopa Enteral Suspension) in Patients with Deep Brain Stimulation
Aaron Tauer, Raghav Govindarajan (Columbia, MO, USA)

58 Withdrawn by author

59 Low Frequency Prefrontal Repetitive Transcranial Magnetic Stimulation in Parkinson's Disease
Hamzeh Migdadi, Alberto Cucca, Kush Sharma, Milton Biagioni (New York, NY, USA)

60 AMPARO Network: A Model for Education of People Living with Parkinson's Disease, their Care Partners and Health Professionals
Maria Elisa Piemonte, Cynthia Dias, Matheus D'Alencar, Carlos Ribas, Andre Helene, Jefferson Galves (Sao Paulo, Brazil)

61 ADS-5102 Reduces ON Time with Troublesome Dyskinesia and OFF Time throughout the Waking Day -- Time Course and Bin Analyses from PD Home Diary
Rita Gandhy, Robert Hauser, Rajesh Pahwa, Caroline Tanner, Reed Johnson (Menlo Park, CA, USA)

62 Clinical Effect of the PKG Watch in the Management of Parkinson's Patients
Nisha Chhabria, Stuart Isaacson (Boca Raton, FL, USA)

63 Circumstances of Falls in People with Parkinson's Disease
Helen Pola, Guilherme Valenca, Isabella Rosa, Jamary Oliveira-Filho, Lorena Almeida (Cachoeira, Brazil)

64 Withdrawn by author

65 Pilates May be an Effective Method for Balance Improvement in PD Patients
David Maciel, Antonia Rosivalda Marinho, Vivia Mesquita, Fernanda Maia Carvalho (Fortaleza, Brazil)

66 Patient and Caregiver Experience with Apomorphine
Arjun Tarakad, Christine Hunter, Joohi Jimenez-Shahed (Houston, TX, USA)

67 Predictors of Levodopa Reduction after Bilateral Subthalamic Nucleus Deep Brain Stimulation for Parkinson Disease
Andrew Ridder, Tingting Zhou, Parag Patil, Kelvin Chou (Ann Arbor, MI, USA)

PARKINSON'S DIESASE: COGNITION

68 Increased Mental Effort during Abstract Thinking and Verbal Reasoning in Parkinson's Disease: A Pilot Study
Melike Kahya, Sanghee Moon, Kelly Lyons, Rajesh Pahwa, Abiodun Akinwuntan, Hannes Devos (Mission, KS, USA)

69 Cognitive Profile of Patients with Parkinson Disease and Deep Brain Stimulation X Parkinson's Disease Patients
Eduarda Barbosa, Helenice Fichman, Jose Nasser (Rio de Janeiro, Brazil)

70 Relationship between Posturography, Clinical Balance and Executive Function in Parkinson´s Disease
Carolina De Oliveira Souza, Mariana Voos, Alessandra Barbosa, Janini Chen, Hsin Fen Chien, Egberto Barbosa (Sao Paulo, Brazil)

71 Bilateral Downward Finger Displacement in Parkinson Disease May be a Sign of Worsening Dementia and a Bedside Test to Distinguish It from Alzheimer's Disease
Aman Deep, Abraham Lieberman (Memphis, TN, USA)

72 Does Age Impact Cognition and Balance in People with Parkinson's Disease Compared with Healthy Older Adults?
Rosemary Gallagher, Michelle Farella-Accurso, Dara Johnson, Ramanjit Kang, Angel Rodriguez, J. Parrott, Evan Cohen (Point Lookout, NY, USA)

73 The Impact on Mood in People Living with Parkinson's Disease When Participating in The Art Cart's Creativity and Movement Program
Saba Shahid, Chad Moir (Norwood, MA, USA)

74 Long-Term Effects of a Group Based Intervention among Individuals with PD
Sabiha Parveen, Kay Headrick, Nancy Payne (Stillwater, OK, USA)

75 Cognitive Impairment and Motor Asymmetric in Parkinson´s Disease
Pamela Soledad Sacco, Manuel Rodriguez (Rosario, Argentina)

76 Pimvanserin (Nuplazid) Effect on Cognitive Function in Parkinson's Disease Psychosis
James Starr, Rachel Grenier, Marcelle Altshuler, Tara Kimbason, Elizabeth Mundel, Nadia Yusuf, Abigail Lawler, Yasar Torres-Yaghi, Charbel Moussa, Fernando Pagan (Washington, DC, USA)

77 The Goalkeeper Game has Higher Prediction Power than MoCA for Gait Performance in People Living with Parkinson's Disease
Matheus D'Alencar, Yanina Uscapi, Cynthia Dias, Rafael Stern, Jefferson Galves, André Helene, Maria Elisa Piemonte (São Paulo, Brazil)

Abstracts by Topic

78 Cognitive Follow-up Performance in Parkinson's Disease: Medical Treatment versus Deep Brain Stimulation
Larissa Freire, Sabrina Cardoso, Maira Olchik, Carlos Rieder (Porto Alegre, Brazil)

79 Preliminary Results of Cognitive Effects in Parkinson's Disease Patients with DBS On and Off
Jose Nasser, Eduarda Barbosa, Helenice Charchat Fichman, Asdrubal Falavigna (Rio De Janeiro, Brazil)

PARKINSON'S DISEASE: NEUROIMAGING AND NEUROPHYSIOLOGY

80 Comparison between Topographic Distribution of Cortical Activation in Real and Imagined Movement in PD with DBS
Jose Nasser, Mauricio Negri, Alair Ribeiro, Jose Inacio Neto (Rio De Janeiro, Brazil)

81 Cognitive Impairment Patterns and Cerebral Blood Flow in Patients with Parkinson's Disease with Olfactory Impairment
Kentaro Ohta, Takashi Nakajima (Kashiwazaki, Japan)

82 Effect of Ventricle Size on Development of Freezing of Gait in Parkinson's Disease
Jae Jung Lee (Goyang-si, South Korea)

83 Evaluating Diagnostic Methods in Parkinson Disease: Comparing Substantia Nigra Echogenicity and Nigrostriatal Dopaminergic Activity
Paulina Meza, Pablo Venegas-Francke, Pedro Chana, Vasko Kramer, Rosana Prusso, Horacio Amaral, Carlos Juri (Santiago, Chile)

84 Cholinergic Nucleus 4 Density and Cognition in Parkinson's Disease
Cody Freeman, Scott Sperling, Mark Smolkin, Jamie Blair, Jason Druzgal, Matthew Barrett (Ruckersville, VA, USA)

85 EEG Coherence Correlates of Arithmetic Stress in Parkinson' Disease
Anita Pal, Madhuri Behari, Ratna Sharma (New Delhi, India)

86 Beat-to-Beat Heart Rate Variability is Increased in Leucine-rich Repeat Kinase 2-associated Parkinson's Disease
Claudia Carricarte Naranjo, Connie Marras, Naomi Visanji, David Cornforth, Lazaro Sanchez-Rodriguez, Birgitt Schuele, Samuel Goldman, Mario Estévez, Anthony Lang, Herbert Jelinek, Andres Machado (La Habana, Cuba)

87 TBSS Longitudinal Analysis in Parkinson's Disease
Rachel Guimaraes, Thiago Rezende, Paula Azevedo, Luiza Piovesana, Fernando Cendes (Campinas, Brazil)

88 Comparative Study between 99mTc-TRODAT-1 SPECT and 18F-FDOPA PET in Subjects with Clinically Diagnosed Parkinson's Disease. Preliminary Results
Julieta Arena, Leandro Urrutia, German Falasco, Silvia Vazquez, Marcelo Merello (Buenos Aires, Argentina)

PARKINSON'S DISEASE: NON-MOTOR SYMPTOMS

89 Translation, Linguistic and Cultural Adaptation, Reliability and Validity of the Questionnaire "Radboud Oral Inventory Motor for Parkinson's Disease – ROMP
Annelise Ayres, Maira Olchik, Monia Presotto, Hanneke Kalf, Carlos Rieder (Porto Alegre, Brazil)

90 Activities of Daily Living and Quality of Life in Patients with Advanced Parkinson's Disease Who Are Treated with or Planning to Use Device-Aided Treatments
Alfonso Fasano, Klaus Seppi, Victor Fung, Zvezdan Pirtosek, Juan Parra Riaza, Lars Bergmann, Olga Sanchez-Soliño, Bulent Elibol, Koray Onuk (Toronto, ON, Canada)

91 A Mindfulness Exercise May Improve Sleep Quality and Change Inflammatory Biomarker Level in Parkinson's Disease: A Pilot Study
Sanghee Moon, Marshall Schmidt, Irina Smirnova, Yvonne Colgrove, Wen Liu (Kansas City, KS, USA)

92 Frequency of Autonomic and Cardiovascular Abnormalities in Mexican Patients with Early Parkinson´s Disease
Jose Angel Balderas, Alejandra Duarte, Isael Reyes-Melo, Jesus Barrón, Benjamin Octavo (Mexico City, Mexico)

93 Remotely Supervised Transcranial Direct Current Stimulation (RS-tDCS) to Mitigate Fatigue and Cognitive Decline: A Novel Protocol for Parkinson's Disease
Kush Sharma, Shashank Agarwal, Daniella Mania, Alberto Cucca, Hamzeh Migdadi, Leigh Charvet, Milton Biagioni (New York, NY, USA)

94 Interaction between Vowel Lengthening and Tonal Alignment in Parkinson's Disease
Marcelo Vieira, Hugo de Resende, Victor Quintas, Tiago Attoni, Larissa Baracho, Ana Teresa Britto, Francisco Cardoso, Rui Rothe-Neves (Belo Horizonte, Brazil)

95 Speech and Voice Impairments and Quality of Life in Communication: A Matter of Aging or Parkinson's Disease Progression?
Camila Lirani-Silva, Lilian Gobbi, Lucia Mourão (São Paulo, Brazil)

96 Evaluation of Disautonomy through Scopa-AUT in Parkinson's Disease and Multiple System Atrophy in Early Stages
Viviana Martinez Villota (San Juan de Pasto, Colombia)

97 Surveying the Prevalence of Sexual Dysfunction in a Population of Parkinson's Patients and their Care Partners
Daniel Roque, Diana Drazheva, Jessica Shurer, Sharon Nesher, Yael Manor, Tanya Gurevich, Kevin Robertson, Nina Browner (Durham, NC, USA)

PEDIATRIC MOVEMENT DISORDERS

98 Episodic Ataxia 1: A Case Study in Correlating Clinical Observation to Pathology
Matthew Dawson, Debabrata Ghosh (Columbus, OH, USA)

99 Movement Disorders in Children with Metabolic Diseases
Daniela Munoz, Monica Troncoso, Pamela Gonzalez, Isadora Ruiz, Paola Santander, Guillermo Fariña, Constanza Elgueta, Maria Hidalgo, Valentina Andrea Naranjo Lobo (Santiago, Chile)

QUALITY OF LIVE / CAREGIVER BURDEN IN MOVEMENT DISORDERS

100 Functional Characterization and Quality of Life in Patients with Parkinson's Disease
Diana Murcia Rojas, Oscar Bernal-Pacheco, Sandra Bibiana Avendaño (Bogota, Colombia)

Abstracts by Topic

101 Patient-Reported Falls and Fear of Falling in a Prospective Study of Droxidopa for Treatment of Neurogenic Orthostatic Hypotension
Steven Kymes, Clément François, Kim McLeod, Amy Duhig, Augustina Ogbonnaya, Apryl Quillen, Joan Cannon, Cyndya Shibao, Binglin Yue, Robert Hauser, Italo Biaggioni (Deerfield, IL, USA)

RARE GENETIC AND METABOLIC DISEASES

102 Withdrawn by author

103 Basal Ganglia Mineralization in an Adult Patient with Ataxia, Spasticity and Mitochondrial Genome Mutations
Molly Cincotta, Pedro Gonzalez-Alegre, Tanya Bardakjian, Jori Fleisher, Andres Deik (Philadelphia, PA, USA)

104 Differentiating EA1 and EA2: A Systematized Review of the Literature
Claudio De Gusmao, Lucas Garcia, Fernando Costa, Jonathan Mink, Alex Paciorkowski, Laura Silveira-Moriyama (Boston, MA, USA)

105 Episodic Ataxia Type 1 and Paroxysmal Kinesiogenic Dyskinesia: Differentiating Features in an Overlapping Phenotype
Claudio De Gusmao, Lucas Garcia, Amanda Reis, Gabriela Santos, Fernando Costa, Jonathan Mink, Alex Paciorkowski, Laura Silveira-Moriyama (Boston, MA, USA)

106 A Systematized Review of Kinesiogenic Triggers in Episodic Ataxias
Lucas Garcia, Claudio De Gusmao, Fernando Costa, Jonathan Mink, Alex Paciorkowski, Laura Silveira-Moriyama (São Paulo, Brazil)

RATING SCALES

107 Design and Validation of a New Instrument to Assess Fear of Falls in Parkinson's Disease
Cinthia Terroba, Veronica Bruno, Patricio Millar-Vernetti, Simone Brockman, Marcelo Merello, Sergio Starkstein (Buenos Aires, Argentina)

108 MDS-UPDRS Correlation with Non-motor Scales in Patients with Parkinson's Disease
Erika Driver Dunckley, Nan Zhang, Holly Shill, Shyamal Mehta, Christine Belden, Edward Zamrini, Kathryn Davis, Thomas Beach, Charles Adler (Scottsdale, AZ, USA)

109 Reliability and Validity of the Brazilian-Portuguese Version of the Activities-specific Balance Confidence Scale and the Falls Efficacy Scale – International in People with Parkinson's Disease
Lorena Almeida, Guilherme Valenca, Helen Pola, Isabella Rosa, Jamary Oliveira-Filho (Salvador, Brazil)

110 Handling Missing Values in the Unified Dyskinesia Rating Scale
Sheng Luo, Christopher Goetz, Glenn Stebbins (Durham, NC, USA)

111 Item Response Theory Analysis of the Unified Dyskinesia Rating Scale Items
Christopher Goetz, Sheng Luo, Glenn Stebbins (Chicago, IL, USA)

RESTLESS LEGS SYNDROME AND OTHER SLEEP DISORDERS

112 Anxiety in Idiopathic Rapid Eye Movement Sleep Behavior Disorder: Dimensions and Overlap with Depressive and Motor Symptoms
Pierre-Alexandre Bourgouin, Frédérique Escudier, Ron Postuma, Jacques Montplaisir, Amélie Pelletier, Jean-François Gagnon (Boucherville, PQ, Canada)

113 The Feasibility of Using 99mTc - TRODAT- 1 SPECT in the Diagnosis of Outpatients with RLS – A Study with 24 Patients
Giorgio Fabiani, Raul Martins Filho, Francisco Germiniani, Helio Teive (Curitiba, Brazil)

SPASTICITY

114 Comparison of OnabotulinumtoxinA Utilization and Effectiveness across Various Etiologies of Spasticity from the Adult Spasticity International Registry Study: ASPIRE
Francisco Gerard, Daniel Bandari, Ganesh Bavikatte, Wolfgang Jost, Aleksej Zuzek, Joan Largent, Alberto Esquenazi (Houston, TX, USA)

115 Improved Access to Spasticity Care Following Deinstitutionalization of Individuals with Intellectual Disabilities
Kelly Harper, Maxim Turchan, Mallory Hacker, Philip Charles (Nashville, TN, USA)

116 Stiff Person Syndrome Presenting with Spastic Dysarthria
Amanda Persaud, Natalya Shneyder, Michael Pulley, Samuel Giles (Jacksonville, FL, USA)

117 Intrathecal Baclofen Effects in Stiff Person Syndrome: Clinical and Instrumented Gait Analysis
Maria Sheila Rocha, Paulo Roberto Terzian, Rodrigo Ferreira, Ahmad Ali Majdoub, Jamana Barbosa, Fabio Godinho (Sao Paulo, Brazil)

118 Withdrawn by author

TICS/STEREOTYPIES

119 Unusual Complex Motor Tics Involving Trunk in Children with Tourette Syndrome
Manuel Vides, Debabrata Ghosh (San Salvador, El Salvador)

120 Withdrawn by author

121 Painless Legs and Moving Toes presenting as a Tardive Phenomenon – Case Report and Review of Literature
Elanagan Nagarajan, Bollu Pradeep (Columbia, MO, USA)

122 Paliperidone-associated Tardive Tourettism
Bhavana Patel, Irene Malaty (Gainesville, FL, USA)

TREMOR

123 Outcomes after Exercise in the 73 Year Old Male with PD with Deep Brain Stimulation
Sabrina Mele (Philadelphia, PA, USA)

124 Not Everything is Worsening Parkinson's Disease: A Case to Highlight the Difficulty in Managing Abnormal Movements
Adeel Memon, Marissa Dean, Anthony Nicholas (Birmingham, AL, USA)

Abstracts by Topic

CHOREAS (NON-HUNTINGTON'S DIESEASE)

CLINICAL TRIALS AND THERAPY IN MOVEMENT DISORDERS

COGNITIVE DISORDERS

DYSTONIA

Abstracts by Topic

MYOCLONUS

OTHER

Abstracts by Topic

177 Withdrawn by author

178 Aquatic Physical Therapy in People with Parkinson's Disease: Motor Repercussions, Activities of Daily Living and Quality of Life
Vera Israel, Bruna Yamaguchi, Juliana Siega, Thalyssa Mocelin, Adriano Silva (Curitiba, Brazil)

179 Cross Cultural Care in Movement Disorders
DeJarra Johnson, Alexander Green, Joseph Betancourt, Nicte Mejia (Mobile, AL, USA)

PARKINSONISM, MSA, PSP (SECONDARY AND PARKINSONISM-PLUS)

180 Clinical and Imaging Characteristics of Atypical Parkinsonism; Case Series
Jorge Escobedo (Mexico City, Mexico)

181 Withdrawn by author

182 Corticobasal Syndrome Variants: Is Functional Nuclear Imaging with FDG-PET or SPECT Pattern Capable of Predicting Clinical Features?
Jacy Parmera, Mateus Aranha, Adalberto Neto, Carlos Buchpiguel, Egberto Barbosa, Sonia Dozzi Brucki (Sao Paulo, Brazil)

183 Withdrawn by author

184 Withdrawn by author

185 Withdrawn by author

186 Withdrawn by author

187 Sudden Onset of Severe Parkinsonism with PSP-like Symptoms Following Endovascular Embolization in a Patient with Brain Arteriovenous Malformation
Giorgio Fabiani, Francisco Germiniani, Helio Teive (Curitiba, Brazil)

PARKINSON'S DISEASE: CLINICAL TRIALS, PHARMACOLOGY AND TREATMENT

188 Safety and Efficacy of Levodopa-Carbidopa Monotherapy in Patients with Advanced Parkinson's Disease
James Boyd, Cindy Zadikoff, Janet Benesh, Jorge Zamudio, Weining Robieson, Pavnit Kukreja (Burlington, VT, USA)

189 Long-term Efficacy of Inhaled Levodopa in Parkinson's Disease Subjects with Motor Fluctuations: A Phase 3 Open-label Randomized Study
Donald Grosset, Rohit Dhall, Tanya Gurevich, Jan Kassubek, Werner Poewe, Olivier Rascol, Monika Rudzinska, Jennifer Cormier, Alexander Sedkov, Charles Oh (Glasgow, United Kingdom)

190 Long-term Pulmonary Safety of Inhaled Levodopa in Parkinson's Disease Subjects with Motor Fluctuations: A Phase 3 Open-label Randomized Study
Donald Grosset, Rohit Dhall, Tanya Gurevich, Jan Kassubek, Werner Poewe, Olivier Rascol, Monika Rudzinska, Jennifer Cormier, Alexander Sedkov, Charles Oh (Glasgow, United Kingdom)

191 Inhaled Levodopa Administered with Oral Carbidopa/ Levodopa for Early Morning OFF Symptoms in Patients with Parkinson's Disease: Safety Assessment
Aaron Ellenbogen, Robert Hauser, Stuart Isaacson, Beth Safirstein, Daniel Truong, Ping Zhao, Steven Komjathy, Charles Oh (Farmington Hills, MI, USA)

192 Inhaled Levodopa Administered with Oral Carbidopa/ Levodopa for Early Morning OFF Symptoms in Patients with Parkinson's Disease: Exploratory Efficacy Analysis
Stuart Isaacson, Aaron Ellenbogen, Robert Hauser, Beth Safirstein, Daniel Truong, Steven Komjathy, Ping Zhao, Deena Kegler-Ebo (Boca Raton, FL, USA)

193 Rationale and Design of an Open-Label, Randomized, 26-Week Study Comparing Levodopa-Carbidopa Intestinal Gel to Optimized Medical Treatment on Non-Motor Symptoms in Patients with Advanced Parkinson's Disease – INSIGHTS Study
K Ray Chaudhuri, Daniel Weintraub, Angelo Antonini, Weining Z. Robieson, Mei Li, Krai Chatamra, Janet Benesh, Maurizio F. Facheris (London, United Kingdom)

194 A long-term Study on Effectiveness of Levodopa-carbidopa Intestinal Gel Treatment in Advanced Parkinson's Disease Patients
K Ray Chaudhuri, Angelo Antonini, Werner Poewe, David Standaert, Per Odin, Jorge Zamudio, Lars Bergmann (London, United Kingdom)

195 Safety of Levodopa-carbidopa Intestinal Gel Treatment in Advanced Parkinson's Disease Patients Receiving = 2000 mg Daily Dose of Levodopa
Cindy Zadikoff, James T. Boyd, Stephanie Dubow, Lars Bergmann, Weining Z. Robieson, Horia Ijacu, Janet Benesh (Chicago,IL, USA)

196 Movement Disorder Specialists' Determination of Eligibility for Device Aided Treatment in Advanced Parkinson's Disease: Results from the OBSERVE-PD Study
Alfonso Fasano, Klaus Seppi, Victor SC Fung, Juan Carlos Parra, Lars Bergmann, Kavita Sail, Yash J. Jalundhwala, Koray Onuk (Toronto, ON, Canada)

197 Non-motor Symptoms (NMS) Improvement Is Positively Correlated with Baseline NMS Burden and Improved Quality of Life in Advanced Parkinson's Disease Patients Treated with Levodopa-carbidopa Intestinal Gel: A Post-hoc Analysis from the GLORIA Registry
Werner Poewe, Lars Bergmann, Angelo Antonini, K. Ray Chaudhuri (Innsbruck, Austria)

198 A Multicenter, Parallel-group, Rater-blinded, Randomized Clinical Study Investigating the Efficacy, Safety and Tolerability of 2 Dosing Regimens of ND0612
Werner Poewe, Fabrizio Stocchi, Tatyana Simuni, Aaron Ellenbogen, Mika Leionen, Tami Rachmilewitz, Ryan Case, Karl Kieburtz, C. Warren Olanow (Innsbruck, Austria)

199 Titration of Levodopa-Carbidopa Intestinal Gel in US Patients with Advanced Parkinson's Disease
Jason Aldred, Thomas Davis, Jorge Zamudio, Pavnit Kukreja, Lars Bergmann, Mei Li, David Standaert (Spokane, WA, USA)

200 Withdrawn by author

201 iNDiGO: A Multicenter, Randomized, Double-blind, Placebo-controlled, Study of Continuous ND0612 Infusion with Adjunct Oral Levodopa in Fluctuating Parkinson's Disease
Peter LeWitt, Fabrizio Stocchi, Stuart Isaacson, Mika Leionen, Tami Rachmilewitz, Ryan Case, Karl Kieburtz, C. Warren Olanow (West Bloomfield, MI, USA)

202 Professional Art Therapy Intervention for Rehabilitation in Parkinson's Disease: A Feasibility Study
Alberto Cucca, Ikuko Acosta, Marygrace Berberian, Neha Chawla, Dasha Daniel, Rebecca Friedes, Joey Korein, Hamzeh Migdadi, Kush Sharma, Maria Kondratiev Sossi, Alessandro Di Rocco, Milton Biagioni (New York, NY, USA)

Abstracts by Topic

203 Pilot Study of Mobile App to Improve Goal-directed Behavior in Parkinson's Disease
Chinwe Nwadiogbu, Jennifer Liu, Nabila Dahodwala (Philadelphia, PA, USA)

204 The Effects of Respiratory Muscle Training on Peak Cough Flow in Patients with Parkinson´s Disease
Alvaro Reyes, Adrian Castillo, Javiera Castillo, Isabel Cornejo (Santiago, Chile)

205 Framework for a Patient-Reported Natural History of Parkinson Disease
Lakshmi Arbatti, Andrew Nguyen, Connie Marras, David Standaert, Caroline Tanner, Luba Smolensky, Catherine Kopil, Lauren McLaughlin, Emily Flagg, Carol Christopher, Ira Shoulson (Sarasota, FL, USA)

206 Transcranial Magnetic Stimulation and Aerobic Exercise Increase BDNF-TrkB Signaling in Parkinson's Disease
Milton Biagioni, Hamzeh Migdadi, Shashank Agarwal, Alberto Cucca, Kush Sharma, Rebecca Friedes, M. Felice Ghilardi, Alessandro Di Rocco, Hoau-Yan Wang (New York, NY, USA)

PARKINSON'S DISEASE: GENETICS

207 Evaluation of Genetic Influence of MAPT on Clinical and Motor Functions among Idiopathic Parkinson's Disease Patients: A Comparative Study
Wael Ibrahim, Hatem Shehata, Laila Rashed, Asmaa Sabbah, Hanan Amer (Giza, Egypt)

208 Serum Urate as a Biomarker of Resistance to Parkinson's Disease among Carriers of Pathogenic GBA Mutations
Eric Macklin, Grace Crotty, Rachit Bakshi, Michael Schwarzschild (Boston, MA, USA)

209 Nucleotide Repeats as Genetic Risk Factors in a Swedish Parkinson's Disease Cohort
Jose Laffita-Mesa, Lovisa Brodin, Per Svenningsson (Stockholm, Sweden)

210 (Epi)-genetic Alterations in c9orf72 and ATXN2: Gene Partners in ALS/FTD, Spinocerebellar Ataxias and in Parkinson Disease
Jose Laffita-Mesa, Per Svenningsson (Stockholm, Sweden)

211 Montreal cognitive assessment in LRRK2 G2019S carriers versus matched controls with Parkinson disease
Steven Gunzler, David Riley, Shu Chen, Curtis Tatsuoka, William Johnson, John Mieyal, Ellen Walter, Christina Whitney, I. Jung Feng, Amy Wilson-Delfosse (Shaker Heights, OH, USA)

212 Increased Peripheral Sphingolipids in GBA Mutation and Idiopathic Parkinson Disease
Roberto Ortega, Izolda Mileva, Amanda Glickman, Mariel Pullman, Imali Perera, Anna Vaigast, Sonya Elango, Elimelech Wieder, Michael Pauciulo, Deborah Raymond, William Nichols, Laurie Ozelius, Susan Bressman, Dongming Cai, Yusuf Hannun, Lina Obeid, Rachel Saunders-Pullman (New York, NY, USA)

213 The Parkin Gene Mutations probability in Patients with Early-Onset Parkinson's Disease
Andrei Ivashynka, Sergei Likhachev (Minsk, Belarus)

214 Screening of Parkinson's disease genes in Latino families from LARGE-PD
Oswaldo Lorenzo-Betancor, Mario Cornejo-Olivas, Elison Sarapura, Luis Torres, Miguel Inca-Martinez, Pilar Mazzetti, Carlos Cosentino, Federico Micheli, Vitor Tumas, Cyrus Zabetian, Ignacio Mata (Seattle, WA, USA)

PARKINSON'S DISEASE: NON-MOTOR SYMPTOMS

215 Association between Pain and Quality of Life in Patients with Parkinson's Disease
Ignacia Rosalia Martinez (Mexico, Mexico)

216 Dissociation between Vocal Performance of Sung and Spoken Material in Parkinson's Disease
Michelle Ferreira, Henrique Ferraz, Vanderci Borges, Roberta Arb Saba, Mariana Benassi-Werke, Maria Gabriela Menezes Oliveira (São Paulo, Brazil)

217 A Non-motor Symptom Unheard Of? Hearing Loss in Mexican Patients with Parkinson's Disease
Sergio Castillo, Christopher Cerda-Contreras, Germán Soto-Galindo, José Treviño-González, Ingrid Estrada Bellmann (Monterrey, Mexico)

218 What Does Fatigue Mean to Persons Living with Parkinson Disease?
Derek George, Nicholas Baer, Jacqueline Jones, Benzi Kluger (Lakewood, CO, USA)

219 Prevalence of Fatigue in Parkinson´s Disease Patients
Daniel Nassif, Joao Pereira (Nova Friburgo, Brazil)

220 Implementation of Sniffin Sticks Test in Honduran Patients with Parkinson's disease: A Matched Case Control Study
Jorge Ortiz, Alex Medina, Hector Pineda, Pedro Gómez, Rina Medina, Claudia Avila (Tegucigalpa, Honduras)

221 Evaluation of the Internal Reliability of the Dysarthria Impact Profile (DIP) Protocol in a Brazilian Population with Parkinson's Disease
Victor Quintas, Tiago Attoni, Francisco Cardoso, Ana Teresa Britto, Hugo de Resende, Marcelo Vieira, Larissa Baracho, Serge Pinto, Rui Rothe-Neves (Belo Horizonte, Brazil)

222 Non-motor Symptoms in Parkinson's Disease Patients and Their Impact on the Quality of Life. Unit of Neurology. Iahula. Mérida-Venezuela. January-June 2015
Anilu Daza Restrepo, Hilarion Araujo (Caracas, Venezuela)

223 Hyposmia: Correlation with Cognitive Performance in Patients with Parkinson's Disease
Sabrina Cardoso, Maira Olchik, Larissa Freire, Carlos Rieder, Artur Schumacher Schuh (Porto Alegre, Brazil)

224 Effects of Probiotics on Constipation, Neurological Symptoms, and Quality of Life Associated with Parkinson's Disease
Duarte Machado, Georgia Mergner, Kelly Blessing, Lucy Honeycutt (Hamden, CT, USA)

PARKINSON'S DISEASE: PATHOPHYSIOLOGY

225 sEH Inhibitor, APAU, Protects Dopaminergic Neurons against Rotenone Induced Toxicity
Navya Lakkappa, Praveen Krishnamurthy, Pandareesh Mirazkar Dasharatharao, Bruce D Hammock, Sung Hee Hwang (Banglore, India)

226 Properties of Oscillatory Neurons in the Basal Ganglia and Thalamus in Patients with Parkinson's Disease
Ping Zhuang, Mark Hallett, Gang Du, Yuqing Zhang, Yongjie Li (Beijing, Peoples Republic of China)

Abstracts by Topic

227 Withdrawn by author

228 Withdrawn by author

229 Assessment of Serum Mortalin in Parkinson's Disease Correlating with Alpha-Synuclein
Amrendra Singh, Teena Bajaj, Vinay Goyal, Sharmistha Dey (New Delhi, India)

230 Targeting Fyn to Ameliorate Levodopa Induced Dyskinesia in the Mice Model of Parkinson's Disease
Juan Ferrario, Bordone Melina, Ana Damianich, Alejandra Bernardi, Maria-Elena Avale, Oscar Gershanik (Buenos Aires, Argentina)

PARKINSON'S DISEASE: PSYCHIATRIC MANIFESTATIONS

231 Impulse Control Disorders and Related Disorders Across Time in Mexican Patients with Parkinson's Disease
Guillermo Delgado-García, Amin Cervantes-Arriaga, Natalia Ospina Garcia, Mayela Rodriguez Violante (Mexico City, Mexico)

232 Telepsychiatry for Patients with Movement Disorders: A Study of Patient Satisfaction
Andreea Seritan MD, Jill Ostrem (San Francisco, CA, USA)

233 Psychiatric Symptoms as Prodrome of Parkinson's Disease
Andreea Seritan MD, Christopher Rienas, Tammy Duong, Jill Ostrem (San Francisco, CA, USA)

234 Neuropsychiatric Symptoms in Patients with Early Parkinson's Disease in the Mexican Population
Kenia Arredondo Blanco, Rosaura Julissa Rodríguez, Natalia Ospina Garcia, Christian Perez-Lohman, Juan Diego Vargas-Jaramillo, Rosalía Zerón-Martínez, Alejandra De La Cruz-Landeros, Vanessa González-Hernánez, Mayela Rodriguez Violante, Amin Cervantes-Arriaga (Quito, Ecuador)

PHENOMENOLOGY AND CLINICAL ASSESSMENT OF MOVEMENT DISORDERS

235 Diagnosing Essential Tremor, Parkinson's Disease and Dystonic Tremor Using Smartphone Accelerometers
Arjun Balachandar, Musleh Algarni, Lais Oliveira, Hamza Jalal, Alfonso Fasano (Windsor, ON, Canada)

236 Diagnostic Impact of Movement Disorders Subspecialty Consultations at a VA Hospital
Brandon Barton (Chicago, IL, USA)

237 Levodopa-induced Dyskinesia in Parkinson Disease: A Community Based Study in Santa Clara, Cuba
Miriam Batule Dominguez, Elien Castro Ortiz, Alain León Medina (Santa Clara, Cuba)

238 Personal KinetiGraph™ Movement Recording System: An Assessment of Utility in a Movement Disorder Clinic
Fatta Nahab, Hamad Abuhussain, Lissette Moreno (San Diego, CA, USA)

239 Stability of Parkinson's Disease Subtypes Based on Cluster Analysis in a Large Cohort
Artur Schumacher Schuh, Oswaldo Lorenzo-Betancor, James Leverenz, Hubert Fernandez, Liana Rosenthal, Ted Dawson, Marilyn Albert, Zbigniew Wszolek, Owen Ross, Dennis Dickson, Joseph Quinn, Kathryn Chung, Amie Hiller, Alberto Espay, Johnna Devoto, Fredy Revilla, Jennifer Goldman, Glenn Stebbins, Bryan Bernard, Thomas Montine, Cyrus Zabetian, Ignacio Mata (Porto Alegre, Brazil)

240 How Can You Achieve a Reliable Qualitative Gait Evaluation Using Only a GoPro© Camera?
Matheus D'Alencar, Norberto Peña, José Vivas Miranda, Maria Elisa Piemonte (São Paulo, Brazil)

241 Involuntary Movements Associated with Encefalitis Autoimmune ANTINMDA-R: Clinical Case Report
Marlene Huamani Mendoza, Marco Huertas (Lima, Peru)

242 Abnormal Movements as One of the Main Manifestations of Autoimmune Encephalitis
Diana Murcia Rojas, Oscar Bernal-Pacheco, Juliana Vargas, Oscar Iván Castro Angulo, Manuela Ochoa-Urrea, Viviana Torres (Bogota, Colombia)

SURGICAL THERAPY: OTHER MOVEMENT DISORDERS TECHNOLOGY

243 Effects of Cerebellar Neuromodulation in Movement Disorders: A Systematic Review
Carina Franca, Daniel De Andrade, Manoel Teixeira, Ricardo Galhardoni, Valquiria Silva, Egberto Barbosa, Rubens Cury (São Paulo, Brazil)

244 Targeting the Right Spot in a Patient with Essential Tremor and Parkinson's Disease: Does the Tractography Matter?
Clarice Listik, Natally Santiago, Paul Reis, Fabio Godinho, Kleber Paiva Duarte, Manoel Teixeira, Egberto Barbosa, Rubens Gisbert Cury (Sao Paulo, Brazil)

245 Successful Bilateral Subthalamic Nucleus Stimulation in Refractory Status Dystonicus
Rubens Cury, Breno José Alencar Pires Barbosa, Rafael Bernhardt Carra, Kleber Paiva Duarte, Fabio Godinho, Daniel Ciampi, Manoel Jacobsen Teixeira, Egberto Reis Barbosa (São Paulo, Brazil)

SURGICAL THERAPY: PARKINSON'S DISEASE

246 Health Disparities and Short-term Outcomes Analysis of a Multiethnic Sample Receiving Deep Brain Stimulation for Parkinson's Disease at a Tertiary Referral Center
Daniel Garbin Di Luca, Juan Sebastian Rojas, Henry Moore, Carlos Singer, Bonnie Levin, Iahn Cajigas, Jonathan Jagid, Corneliu Luca (Miami Beach, FL, USA)

247 Cerebellar Stimulation for Acquired Generalized Dystonia: A Case Report
Ethan Brown, Ian Bledsoe, Nijee Luthra, Svjetlana Miocinovic, Philip Starr, Jill Ostrem (San Francisco, CA, USA)

248 Withdrawn by author

249 Quality of Life of the Patient with Parkinson's Disease Before and After the Implementation of the Deep Cerebral Simulator (DBS)
Juan Vargas Jaramillo (Bogota, Colombia)

250 Forel H1 Stimulation for Parkinson's Disease Gait Disorders: An Instrumented Gait and Balance Analysis
Fabio Godinho, Carlos Costa, Paulo Roberto Terzian, Maria Sheila Rocha (Sao Paulo, Brazil)

251 Altenate Deep Brain Stimulation Parameters for Managing the Motor Symptoms of Parkinson's Disease: A Systematic Review and Meta-analysis
Zachary Conway, Peter Silburn, Wesley Thevathasan, Karen O'Maley, Michael Cole (Brisbane, QN, Australia)

Abstracts by Topic

252 Proposition of the GACPC© Algorithm for DBS to Optimize Nuclei Targeting and Postoperative Programming
Nevair Gallani, Armando Alaminos-Bouza, Sylvine Carrondo-Cottin, Michel Prudhomme, Leo Cantin, Paulo Aguiar (Campinas, Brazil)

253 A Simulation-based Study of a Novel Trajectory for Parkinson's Disease DBS: Does It Affect STN Stimulation?
Nevair Gallani, Armando Alaminos-Bouza, Sylvine Carrondo-Cottin, Michel Prudhomme, Leo Cantin, Paulo Aguiar (Campinas, Brazil)

254 One-year Follow-up of Subthalamic Deep Brain Stimulation in Parkinson's Disease
Lorena Barcelos, Murilo Marinho, Carolina Da Silva, Beatriz Godke Veiga, Caroline Zorzenon, Danilo Faria, Diego Pinheiro, Roberta Saba, Sonia Silva, Vanderci Borges, Henrique Ferraz (Sao Paulo, Brazil)

THERAPY IN MOVEMENT DISORDERS: GENE AND CELL-BASED THERAPIES

255 Dysfunction of the Microtubule Associated Protein TAU in Motor and Cognitive Impairments: A Potential Molecular Therapy for Tauopathies
Maria-Elena Avale, Ana Damianich, Manuela Sartor, Sonia Espindola, Juan Ferrario (Buenos Aires, Argentina)

256 AAV2/1-hVEGF-B Overexpression Improves Motor Outcomes in PINK1 Gene Knockout Rat: An Insight into Potential Mechanisms
Mitchell Bartlett, Sofia Cristiani, Benjamin Silashki, Dyana Muller, Drew Farrell, Kate Parent, Kristian Doyle, Michael Heien, Scott Sherman, Torsten Falk (Tucson, AZ, USA)

Late-Breaking Abstracts

A Late-Breaking Abstract is any abstract reporting information that became available for public dissemination after the deadline of the regular abstract submission. It must be of critical importance to the clinical and/or scientific community and/or the public and should be newsworthy.

All accepted Late-Breaking Abstract posters are displayed in Concerto Ballroom throughout the duration of the PAS Congress. Late-Breaking Abstract poster presentations will take place Saturday, June 23 from 13:00 – 14:30.

LATE-BREAKING ABSTRACT POSTER SESSION

Saturday, June 23, 2018
Poster Session: 13:00 - 14:30
Location: Concerto Ballroom

LBA 01 Progressive Relaxation Trainning in Parkinson's Patients as a Way to Manage Levodopa Induced Dyskinesia
A. Aguilar, J. Herruzo (Cordoba, Spain)

LBA 02 Cognitive Changes in DBS-STN Implant in Parkinson Disease: Analysis of Neuroimaging and Clinical Variables
F. Caillava-Santos (Porto Alegre, Brazil)

LBA 03 Efficacy and Safety of Sublingual Apomorphine film (APL-130277) for the Treatment of OFF Episodes in Patients with Parkinson's disease: Results from a Double-Blind, Placebo-Controlled Trial
B. Navia, S. Factor, R. Pahwa, R. Hauser, M. Worden, P. Bhargava, G. Vakili, D. Blum (Marlborough, MA, USA)

LBA 04 Microsurgical Anatomy of the Thalamus
V. Holanda, E. Alho, E. Middlebroooks, K. Foote (São Paulo, Brazil)

LBA 05 Mastering the Substantia Nigra: Microsurgical Anatomy to MRI Signal Loss in Parkinson's Disease
V. Holanda, V. Marussi, E. Middlebrooks, C. Souza, S. Casagrande (São Paulo, Brazil)

LBA 06 Examining Parkinson's Disease Psychosis Treatment Outcomes in the Real World: The Insyte Observational Study
J. Goldman, M. Guskey, D. Fredericks, J. Trotter, C. Heywood, A. Ryan, S. Block, S. Rattana, N. Larsen, A. Shim (Chicago, IL, USA)

LBA 07 Understanding the Treatment of Parkinson's Disease Psychosis and Physician-Reported Control of Symptoms Across Treatment Options
C. Tenenbaum, M. Guskey, V. Hotchandani, R. Suresh, D. Fredericks (New York, NY, USA)

LATE-BREAKING ABSTRACT PUBLICATION

Late-Breaking Abstracts are published as an online PDF on the 2nd PAS Congress website and are available for download as of June 22, 2018.

Corporate Therapeutic Symposia

These company-based informational sessions will provide attendees with non-CME educational opportunities to learn the latest in therapeutics.

FRIDAY, JUNE 22, 2018

AbbVie

12:15-13:15

Location: Tenor
Past, Present and Future Measuring of Parkinson's Disease Progression

Lundbeck

12:15-13:15

Location: Symphony III
Patient Stands Up, Blood Pressure Goes Down: Diagnostic and Management Considerations for Symptomatic Neurogenic Orthostatic Hypotension

Sunovion

12:15-13:15

Location: Symphony IV
OFF States in Parkinson's Disease

SATURDAY, JUNE 23, 2018

Neurocrine

6:45-7:45

Location: Symphony III
Advances in Tardive Dyskinesia: A Once daily Treatment Option

Acadia

6:45-7:45

Location: Symphony IV
Spotlight on Serotonin: Serotonin Dysfunction in Parkinson's Disease and Psychosis

AbbVie

12:15-13:15

Location: Tenor
Tau Talks: Beyond Parkinson's Disease

Acorda

12:15-13:15

Location: Symphony III
Live Well Do Tell: Taking the Next Step in the Management of Parkinson's Disease

Adamas

12:15-13:15

Location: Symphony IV
Addressing Dyskinesia in People with Parkinson's Disease: It's About Time

INGREZZA®
(valbenazine) capsules

THE FIRST FDA-APPROVED TREATMENT INDICATED FOR ADULTS WITH **TARDIVE DYSKINESIA (TD)**[1]

ONE CAPSULE, ONCE DAILY[1]

Convenient, once-daily dosing without complex titration[1]

Not actual size

- INGREZZA 80 mg provided rapid and significant reductions in TD severity by 6 weeks[1,2]
  —with continued reductions in TD severity through 48 weeks[1,3]
- Generally well tolerated in clinical trials across a broad range of adult TD patients[1,2]
- Selectively inhibits VMAT2, with no appreciable binding affinity for dopaminergic (including D2) or serotonergic receptors[1]


Not an actual patient

VMAT2, vesicular monoamine transporter 2.

IS IT TD OR ACUTE EPS? | TAKE THE TD CHALLENGE AT BOOTH #12

EPS, extrapyramidal symptoms.

WWW.INGREZZAHCP.COM

Important Information

INDICATION & USAGE

INGREZZA® (valbenazine) capsules is indicated for the treatment of adults with tardive dyskinesia.

IMPORTANT SAFETY INFORMATION

WARNINGS & PRECAUTIONS

Somnolence

INGREZZA can cause somnolence. Patients should not perform activities requiring mental alertness such as operating a motor vehicle or operating hazardous machinery until they know how they will be affected by INGREZZA.

QT Prolongation

INGREZZA may prolong the QT interval, although the degree of QT prolongation is not clinically significant at concentrations expected with recommended dosing. INGREZZA should be avoided in patients with congenital long QT syndrome or with arrhythmias associated with a prolonged QT interval. For patients at increased risk of a prolonged QT interval, assess the QT interval before increasing the dosage.

ADVERSE REACTIONS

The most common adverse reaction (≥5% and twice the rate of placebo) is somnolence. Other adverse reactions (≥2% and >placebo) include: anticholinergic effects, balance disorders/falls, headache, akathisia, vomiting, nausea, and arthralgia.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit MedWatch at www.fda.gov/medwatch or call 1-800-FDA-1088.

Please see the adjacent page for brief summary of Prescribing Information and visit www.INGREZZAHCP.com for full Prescribing Information.

REFERENCES: 1. INGREZZA [package insert]. San Diego, CA: Neurocrine Biosciences, Inc; 2017. **2.** Hauser RA, Factor SA, Marder SR, et al. KINECT 3: a phase 3 randomized, double-blind, placebo-controlled trial of valbenazine for tardive dyskinesia. *Am J Psychiatry*. 2017;174(5):476-484. **3.** Factor SA, Remington G, Comella CL, et al. The effects of valbenazine in participants with tardive dyskinesia: results of the 1-Year KINECT 3 extension study. *J Clin Psychiatry*. 2017;78(9):1344-1350.

Neurocrine BIOSCIENCES

INGREZZA® (valbenazine) capsules
for oral use

Brief Summary: for full Prescribing Information and Patient Information, refer to package insert.

INDICATIONS AND USAGE
INGREZZA is a vesicular monoamine transporter 2 (VMAT2) inhibitor indicated for the treatment of adults with tardive dyskinesia.

WARNINGS AND PRECAUTIONS
Somnolence
INGREZZA can cause somnolence. Patients should not perform activities requiring mental alertness such as operating a motor vehicle or operating hazardous machinery until they know how they will be affected by INGREZZA.

QT Prolongation
INGREZZA may prolong the QT interval, although the degree of QT prolongation is not clinically significant at concentrations expected with recommended dosing. In patients taking a strong CYP2D6 or CYP3A4 inhibitor, or who are CYP2D6 poor metabolizers, INGREZZA concentrations may be higher and QT prolongation clinically significant. For patients who are CYP2D6 poor metabolizers or are taking a strong CYP2D6 inhibitor, dose reduction may be necessary. For patients taking a strong CYP3A4 inhibitor, reduce the dose of INGREZZA to 40 mg once daily. INGREZZA should be avoided in patients with congenital long QT syndrome or with arrhythmias associated with a prolonged QT interval. For patients at increased risk of a prolonged QT interval, assess the QT interval before increasing the dosage.

ADVERSE REACTIONS
The following adverse reactions are discussed in more detail in other sections of the labeling:

- Somnolence
- QT Prolongation

Clinical Trials Experience
Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

Variable and Fixed Dose Placebo-Controlled Trial Experience

The safety of INGREZZA was evaluated in 3 placebo-controlled studies, each 6 weeks in duration (fixed dose, dose escalation, dose reduction), including 445 patients. Patients were 26 to 84 years of age with moderate to severe tardive dyskinesia and had concurrent diagnoses of mood disorder (27%) or schizophrenia/schizoaffective disorder (72%). The mean age was 56 years. Patients were 57% Caucasian, 39% African-American, and 4% other. With respect to ethnicity, 28% were Hispanic or Latino. All subjects continued previous stable regimens of antipsychotics; 85% and 27% of subjects, respectively, were taking atypical and typical antipsychotic medications at study entry.

Adverse Reactions Leading to Discontinuation of Treatment

A total of 3% of INGREZZA treated patients and 2% of placebo-treated patients discontinued because of adverse reactions.

Common Adverse Reactions

Adverse reactions that occurred in the 3 placebo-controlled studies at an incidence of ≥2% and greater than placebo are presented in Table 1.

Table 1: Adverse Reactions in 3 Placebo-Controlled Studies of 6-week Treatment Duration Reported at ≥2% and >Placebo

Adverse Reaction[1]	INGREZZA (n=262) (%)	Placebo (n=183) (%)
General Disorders		
Somnolence (somnolence, fatigue, sedation)	10.9%	4.2%
Nervous System Disorders		
Anticholinergic effects (dry mouth, constipation, disturbance in attention, vision blurred, urinary retention)	5.4%	4.9%
Balance disorders/fall (fall, gait disturbance, dizziness, balance disorder)	4.1%	2.2%
Headache	3.4%	2.7%
Akathisia (akathisia, restlessness)	2.7%	0.5%
Gastrointestinal Disorders		
Vomiting	2.6%	0.6%
Nausea	2.3%	2.1%
Musculoskeletal Disorders		
Arthralgia	2.3%	0.5%

[1] Within each adverse reaction category, the observed adverse reactions are listed in order of decreasing frequency.

Other Adverse Reactions Observed During the Premarketing Evaluation of INGREZZA

Other adverse reactions of ≥1% incidence and greater than placebo are shown below. The following list does not include adverse reactions: 1) already listed in previous tables or elsewhere in the labeling, 2) for which a drug cause was remote, 3) which were so general as to be uninformative, 4) which were not considered to have clinically significant implications, or 5) which occurred at a rate equal to or less than placebo.

Endocrine Disorders: blood glucose increased
General Disorders: weight increased
Infectious Disorders: respiratory infections
Neurologic Disorders: drooling, dyskinesia, extrapyramidal symptoms (non-akathisia)
Psychiatric Disorders: anxiety, insomnia

During controlled trials, there was a dose-related increase in prolactin. Additionally, there was a dose-related increase in alkaline phosphatase and bilirubin, suggesting a potential risk for cholestasis.

DRUG INTERACTIONS
Drugs Having Clinically Important Interactions with INGREZZA
Table 2: Clinically Significant Drug Interactions with INGREZZA

Monoamine Oxidase Inhibitors (MAOIs)	
Clinical Implication:	Concomitant use of INGREZZA with MAOIs may increase the concentration of monoamine neurotransmitters in synapses, potentially leading to increased risk of adverse reactions such as serotonin syndrome, or attenuated treatment effect of INGREZZA.
Prevention or Management:	Avoid concomitant use of INGREZZA with MAOIs.
Examples:	isocarboxazid, phenelzine, selegiline
Strong CYP3A4 Inhibitors	
Clinical Implication:	Concomitant use of INGREZZA with strong CYP3A4 inhibitors increased the exposure (C_{max} and AUC) to valbenazine and its active metabolite compared with the use of INGREZZA alone. Increased exposure of valbenazine and its active metabolite may increase the risk of exposure-related adverse reactions.
Prevention or Management:	Reduce INGREZZA dose when INGREZZA is coadministered with a strong CYP3A4 inhibitor.
Examples:	itraconazole, ketoconazole, clarithromycin
Strong CYP2D6 Inhibitors	
Clinical Implication:	Concomitant use of INGREZZA with strong CYP2D6 inhibitors may increase the exposure (C_{max} and AUC) to valbenazine's active metabolite compared with the use of INGREZZA alone. Increased exposure of active metabolite may increase the risk of exposure-related adverse reactions.
Prevention or Management:	Consider reducing INGREZZA dose based on tolerability when INGREZZA is coadministered with a strong CYP2D6 inhibitor.
Examples:	paroxetine, fluoxetine, quinidine
Strong CYP3A4 Inducers	
Clinical Implication:	Concomitant use of INGREZZA with a strong CYP3A4 inducer decreased the exposure of valbenazine and its active metabolite compared to the use of INGREZZA alone. Reduced exposure of valbenazine and its active metabolite may reduce efficacy.
Prevention or Management:	Concomitant use of strong CYP3A4 inducers with INGREZZA is not recommended.
Examples:	rifampin, carbamazepine, phenytoin, St. John's wort[1]
Digoxin	
Clinical Implication:	Concomitant use of INGREZZA with digoxin increased digoxin levels because of inhibition of intestinal P-glycoprotein (P-gp).
Prevention or Management:	Digoxin concentrations should be monitored when co-administering INGREZZA with digoxin. Increased digoxin exposure may increase the risk of exposure related adverse reactions. Dosage adjustment of digoxin may be necessary.

[1] The induction potency of St. John's wort may vary widely based on preparation.

Drugs Having No Clinically Important Interactions with INGREZZA
Dosage adjustment for INGREZZA is not necessary when used in combination with substrates of CYP1A2, CYP2B6, CYP2C8, CYP2C9, CYP2C19, CYP2E1, or CYP3A4/5 based on *in vitro* study results.

OVERDOSAGE
Human Experience
The pre-marketing clinical trials involving INGREZZA in approximately 850 subjects do not provide information regarding symptoms with overdose.

Management of Overdosage
No specific antidotes for INGREZZA are known. In managing overdose, provide supportive care, including close medical supervision and monitoring, and consider the possibility of multiple drug involvement. If an overdose occurs, consult a Certified Poison Control Center (1-800-222-1222 or www.poison.org).

For further information on INGREZZA, call 84-INGREZZA (844-647-3992).

Distributed by:
Neurocrine Biosciences, Inc.
San Diego, CA 92130

CP-VBZ-US-0203v2 09/17

INGREZZA®
(valbenazine) capsules

ADVANCES IN TARDIVE DYSKINESIA:

A Once-Daily Treatment Option

INGREZZA (valbenazine) capsules is indicated for the treatment of adults with tardive dyskinesia.

DATE:

Saturday, June 23, 2018, 6:45 AM - 7:45 AM

LOCATION:

Hilton Miami Downtown, Symphony Ballroom III, Ballroom Level, Miami, Florida

Breakfast will be provided

PRESENTED BY:

Stuart Isaacson, MD
Director, Parkinson's Disease and Movement Disorders Center of Boca Raton
Boca Raton, Florida

IMPORTANT SAFETY INFORMATION

WARNINGS & PRECAUTIONS

Somnolence

INGREZZA can cause somnolence. Patients should not perform activities requiring mental alertness such as operating a motor vehicle or operating hazardous machinery until they know how they will be affected by INGREZZA.

QT Prolongation

INGREZZA may prolong the QT interval, although the degree of QT prolongation is not clinically significant at concentrations expected with recommended dosing. INGREZZA should be avoided in patients with congenital long QT syndrome or with arrhythmias associated with a prolonged QT interval. For patients at increased risk of a prolonged QT interval, assess the QT interval before increasing the dosage.

ADVERSE REACTIONS

The most common adverse reaction (≥5% and twice the rate of placebo) is somnolence. Other adverse reactions (≥2% and >Placebo) include: anticholinergic effects, balance disorders/falls, headache, akathisia, vomiting, nausea, and arthralgia.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit MedWatch at www.fda.gov/medwatch or call 1-800-FDA-1088.

Please see adjacent page for INGREZZA Brief Summary of Prescribing Information or visit www.INGREZZAHCP.com for full Prescribing Information.

PLEASE VISIT BOOTH 12

This is an informational event provided by Neurocrine Biosciences, Inc. Participants cannot claim CME credit for attending this informational event and participation may be subject to reporting under the Sunshine Act. HCPs licensed in Vermont or Minnesota (as well as their employees, eg, office staff) and federal employees (including VA and DoD) are prohibited from partaking in a meal or snack during this event. Please check the opt-out option when signing in. Attention New Jersey Prescribers: The meal provided exceeds the $15.00 limit under New Jersey law. Please plan to opt out of the meal when you arrive.

Neurocrine BIOSCIENCES

CP-VBZ-US-0611 06/18

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THERAPEUTICS™

CORPORATE THERAPEUTIC SYMPOSIUM

Patient Stands Up, Blood Pressure Goes Down:

Diagnostic and Management Considerations for Symptomatic Neurogenic Orthostatic Hypotension

FRIDAY, JUNE 22ND 12:15-1:15PM ET
SYMPHONY III

SESSION

A multi-disciplinary panel presentation and discussion on the identification and treatment of patients with symptomatic neurogenic orthostatic hypotension (nOH). Presentation will include an overview of nOH and its symptoms, diagnostic and management considerations, and Q&A with the audience.

FACULTY

Suzanne Feigofsky, MD
Electrophysiologist, Iowa Heart Center

Stuart Isaacson, MD
Director, Parkinson's Disease and Movement Disorders Center of Boca Raton
Professor of Neurology, Florida International University

Lundbeck

Content is not approved for continuing medical education (CME).
The value of this meal will be reported in accordance with state and federal laws. In accordance with PhRMA guidance, guests, including spouses, are not permitted to attend this program and it is only intended for those invited.

UBR-D-100367

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Medtronic.com

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This therapy is not for everyone. DBS Therapy requires brain surgery which could have serious or even fatal complications. Other complications can occur and may require additional surgery. Medtronic DBS Therapy may cause worsening of some symptoms. For additional safety information, please refer to Indications, Safety and Warnings at Medtronic.com.

Medtronic
Further, Together

A VIEW INTO PARKINSON'S

VISIT THE SUNOVION BOOTH

Join us for an immersive and interactive exhibit that illustrates life with Parkinson's disease and the types of OFF episodes that patients experience.

LEARN MORE about the struggles of Maggie*, a patient with moderate-to-advanced Parkinson's disease, and the Little Big Things™ that may improve her daily life.

**Fictional patient for illustration only.*

sunovion

OFF States in Parkinson's Disease

Friday, June 22, 2018
12:15 - 13:15
Lunch to be provided - optional

Hilton Downtown Miami
Ballroom Level - Symphony IV
Miami, FL

Symposium Schedule:

- Understanding and appreciating the OFF spectrum in Parkinson's Disease (Hubert Fernandez, MD)
- Pathophysiological mechanisms of OFF states in Parkinson's Disease (Alberto Espay, MD)
- Treatment options and approaches for OFF states in Parkinson's Disease (Tatyana Simuni, MD)
- Panel Discussion (Hubert Fernandez, MD; Alberto Espay, MD; Tatyana Simuni, MD)

This is a non-CME program sponsored by Sunovion Pharmaceuticals Inc. and the speakers are consultants of Sunovion.

Notes

Notes

Advance.
Improve.
Educate.
Collaborate.

International Parkinson and
Movement Disorder Society

Become a Member of MDS

Meet & collaborate with over 7,000 colleagues across the globe and become a part of a Medical and Educational community dedicated to disseminating knowledge and promoting research to advance the field of Movement Disorders

MDS Members receive the following benefits:

Peer Reviewed Journals: *Movement Disorders* and *Movement Disorders – Clinical Practice*

Quarterly Newsletter: *Moving Along*

Reduced Course Registration Rates

Online Resources: CME Activities; Streaming Content; Training Videos; And a Video Library with over 1,800 searchable videos

NON-MEMBER OPPORTUNITIES

Free One-Year Trial Membership
Open to Eligible PAS Congress Delegates

ASSOCIATE MEMBERSHIP

Non-members attending the PAS Congress have the opportunity to receive membership with MDS absolutely free for a year. Eligible participants will be invited by e-mail to apply for free Associate Membership. Interested individuals are encouraged to apply online within 30 days of contact.

Learn more at www.movementdisorders.org/associate-membership.htm or contact the International Secretariat:

MDS International Secretariat
555 East Wells Street, Suite 1100
Milwaukee, WI 53202 USA
Tel: +1 414-276-2145
Fax: +1 414-276-3349
E-mail: info@movementdisorders.org

International Parkinson and
Movement Disorder Society

CERTIFIES THAT

has attended the 2nd Pan American Parkinson's Disease and Movement Disorders Congress in Miami, FL, USA on June 22-24, 2018.

Christopher Goetz
President,
International Parkinson and Movement Disorder Society
2017-2019

Cynthia Comella
Chair,
PAS Congress Scientific Program Committee

Henrique Ferraz
Chair,
MDS Pan American Section

Acknowledgement of Support

The 2nd Pan American Parkinson's Disease and Movement Disorders Congress wishes to acknowledge the following commercial supporters

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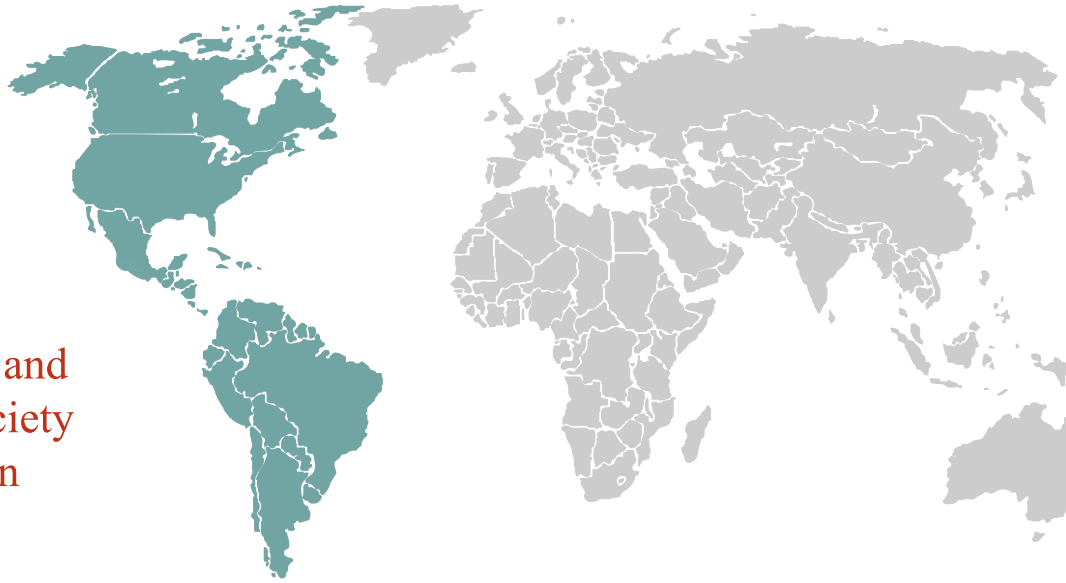
The PAS Congress Scientific Program is supported through unrestricted medical educational grants from:

Abbott AbbVie UCB

MDS thanks the Dystonia Medical Research Foundation for contributing to the 2018 PAS Congress Travel Grant Program.

International Parkinson and
Movement Disorder Society
Pan American Section



3rd Pan American Parkinson's Disease and Movement Disorders Congress

FEBRUARY 2020 MIAMI, FLORIDA, USA

SAVE THE DATE

MDS0518-158