PRELIMINARY PROGRAM



International Parkinson and Movement Disorder Society

MDS *Virtual Congress* 2020

SEPTEMBER 12–SEPTEMBER 16 www.mdscongress.org



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WELCOME

Dear Colleagues,

We are excited to share this MDS Virtual Congress with you. In this first ever virtual congress on movement disorders, you can expect over 30 hours of educational content through our virtual platform, including plenary sessions, teaching courses and access to the accepted abstracts.

The Society made the difficult decision to replace the in-person meeting in Philadelphia with a virtual meeting, and by doing so, is rising to the occasion after the COVID-19 crisis in order to fulfill its mission. This meeting will be open to healthcare professionals across the globe and will allow delegates an opportunity to access the full International Congress Scientific Program content through a virtual platform without concern for health, welfare or travel.

The MDS Virtual Congress 2020 scientific sessions, sponsored symposia, virtual exhibits, and poster sessions will be available on demand for free until October 1, 2020 for those participants who have registered by September 16, 2020. After October 1, 2020 the Virtual Congress will continue to be available on demand for MDS Members for a limited time.

Although we will not meet together in Philadelphia this September, I am proud to see the MDS community come together virtually to achieve our mission.



Claudia Trenkwalder President, International Parkinson and Movement Disorder Society, 2019-2021







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 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 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 (2019-2021)



President Claudia Trenkwalder *Germany*



President-Elect Francisco Cardoso Brazil



Secretary Bastiaan Bloem *Netherlands*



Secretary-Elect Charles Adler USA



Treasurer Louis CS Tan *Singapore*



Treasurer-Elect Irene Litvan *USA*



Past-President Christopher Goetz USA



ABOUT MDS

MDS INTERNATIONAL EXECUTIVE COMMITTEE

Shengdi Chen Mark Edwards Cristian Falup-Pecurariu Joaquim Ferreira Marina de Koning-Tijssen Alice Nieuwboer D. James Surmeier Pille Taba Mayela Rodriguez-Violante Ruey-Meei Wu

MDS VIRTUAL CONGRESS 2020 TASK FORCE

Chairs: Vincenzo Bonifati, *Netherlands* Chairs: Oscar Gershanik, *Argentina* Chairs: Claudia Trenkwalder, *Germany* Francisco Cardoso, *Brazil* Margherita Fabbri, *Italy* Hyder Jinnah, *USA* Andrew Siderowf, *USA* Matthew Stern, *USA* Louis Tan, *Singapore*

CONGRESS SCIENTIFIC PROGRAM COMMITTEE

Chair: Vincenzo Bonifati, Netherlands Co-Chair: Andrew Siderowf, USA Orlando Barsottini, Brazil Roongroj Bhidayasiri, Thailand Per Borghammer, Denmark Francisco Cardoso, Brazil Pietro Cortelli, Italy Alberto Espay, USA Jennifer Friedman, USA Jennifer Goldman, USA Etienne Hirsch, France Beomseok Jeon, South Korea Andrea Kühn, Germany Shen-Yang Lim, Malaysia Karen Marder, USA Wassilios Meissner, France Tiago Outeiro, Germany Maria Stamelou, Greece Carolyn Sue, Australia Ryosuke Takahashi, Japan Claudia Trenkwalder, Germany Ad-Hoc Member: Terry Ellis, USA Ad-Hoc Member: Oscar Gershanik, Argentina Ad-Hoc Member: Hyder Jinnah, USA Ad-Hoc Member: Ron Postuma, Canada Ad-Hoc Member: Veronica Santini, USA

CONGRESS LOCAL ORGANIZING COMMITTEE

Chair: Matthew Stern, USA Co-Chair: Andrew Siderowf, USA Nabila Dahodwala, USA Andres Deik, USA Jill Farmer, USA Pedro Gonzalez-Alegre, USA Dan Kremens, USA Tsao-Wei Liang, USA Meredith Spindler, USA Dan Weintraub, USA Allison Willis, USA

PAST-PRESIDENTS

2017-2019 Christopher Goetz, USA 2015-2017 Oscar Gershanik, Argentina 2013-2015 Matthew Stern, USA 2011-2013 Günther Deuschl, Germany 2009-2011 Philip Thompson, Australia 2007-2009 Anthony Lang, Canada 2005-2006 Andrew Lees, United Kingdom 2003-2004 C. Warren Olanow, USA 2001-2002 Werner Poewe, Austria 1999-2000 Mark Hallett, USA 1997-1998 Eduardo Tolosa, Spain 1995-1996 Joseph Jankovic, USA 1991-1994 C. David Marsden, United Kingdom 1988-1991 Stanley Fahn, USA

INTERNATIONAL MEDICAL SOCIETY FOR MOTOR DISTURBANCES PAST-PRESIDENTS

1993-1994 C. Warren Olanow, USA 1991-1992 Bastian Conrad, *Germany* 1989-1990 Mark Hallett, USA 1987-1988 Mario Manfredi, *Italy* 1985-1986 C. David Marsden, United Kingdom

MDS INTERNATIONAL SECRETARIAT

International Parkinson and Movement Disorder Society 555 East Wells Street, Suite 1100 Milwaukee, WI 53202-3823 USA Tel: +1 414-276-2145 Fax: +1 414-276-3349 Email: info@movementdisorders.org Website: www.movementdisorders.org



VIRTUAL CONGRESS INFORMATION

ABSTRACT POSTER INFORMATION

Beginning on September 11, 2020, Virtual Congress participants can view e-posters in the Virtual Poster Hall. Additionally, all abstracts will be published in the Movement Disorders journal e-supplement.

The MDS Virtual Congress 2020 will also feature sixteen virtual Guided Poster Tours which will be open to all participants.

EXHIBITION

Participants will have the opportunity to visit the Virtual Exhibit Hall beginning on September 12, 2020.

OFFICIAL LANGUAGE

The official language of the 2020 Virtual Congress is English.

REGISTRATION

Registration will open on July 27, 2020 and will be offered to participants at no charge. The MDS Virtual Congress 2020 scientific sessions, sponsored symposia, virtual exhibits, and the virtual poster hall will be available on-demand for free until October 1, 2020 for those participants who have registered by September 16, 2020. After October 1, 2020 the Virtual Congress will continue to be available on demand for MDS Members for a limited time.



VIRTUAL CONGRESS EVENTS

WELCOME CEREMONY

Friday, September 11, 2020 Time: 15:00 - 16:00 GMT

All participants are encouraged to attend the Virtual Congress Welcome Ceremony. MDS President Claudia Trenkwalder and other MDS leaders will introduce this inaugural event and give a preview of what to expect throughout the week.

MDS VIRTUAL VIDEO CHALLENGE

Sunday, September 13, 2020 Time: 19:30 - 22:30 GMT

Monday, September 14, 2020 Time: 2:00 - 5:00 GMT

Please join Masters of Ceremony Anthony Lang and Kapil Sethi as they host world-renowned Movement Disorders experts in guiding participants through unique Movement Disorder cases. The cases will be presented by representatives from Movement Disorder Centers around the world and discussed by Movement Disorder Experts. Awards will be given for the most interesting and challenging cases. Country pride will add an enjoyable spirit of competition to this event. The goal of this session is for participants to learn from a series of unusual, very interesting patients and see how senior experts approach these types of challenging cases.

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. Evaluate the pharmacological and non-pharmacological management options available for Parkinson's disease and other movement disorders
- 2. Discuss the diagnostic approaches and tools available for Parkinson's disease and other movement disorders
- 3. Describe the pathogenesis and neurobiology of 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, it is your responsibility to contact your licensing/ certification board to determine course eligibility for your board requirement.

ACCREDITATION STATEMENT

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME). The International Parkinson and Movement Disorder Society is accredited by the ACCME to provide continuing medical education for physicians.

CREDIT DESIGNATION STATEMENT

The International Parkinson and Movement Disorder Society designates this live activity for a maximum of 28.5 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

CONTENT VALIDITY STATEMENT

All recommendations involving clinical medicine in MDS activities are based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the case of patients. All scientific research referred to, reported or used in CME in support or justification of a patient care recommendations conforms to the generally accepted standards of experimental design, data collection and analysis. Activities that promote recommendations, treatment or manners of practicing medicine not within the definition of CME or are knowing to have risks or dangers that outweigh the benefits or are knowing to be ineffective in the treatment of patients do not constitute valid CME.



SCHEDULE-AT-A-GLANCE

	FRIDAY September 11	SATURDAY September 12	SUNDAY September 13	MON Septerr		TUES Septerr		WEDNESDAY September 16
2:00 2:30 3:00			Therapeutic Plenary Session Encore Presentation 2:00 - 4:00 GMT	Virtual MDS Video Challenge Encore Presentation				KEY CME Accredited Sessions
3:30 4:00			Break 4:00 - 4:30 GMT	2:00 - 5:	00 GMT			Non-CME
4:30 5:00 5:30			Therapeutic Plenary Session Encore Presentation 4:30 - 6:30 GMT					Educational Activities Sponsored Symposia (non-CME)
6:00 6:30		MDS-AOS Regional Assembly 6:00 - 6:30 GMT	Break 6:30 - 7:00 GMT					MDS Activities
7:00 7:30 8:00			Therapeutic Plenary Session Encore Presentation 7:00 - 9:00 GMT					and Events Breaks
8:30 9:00			Break 9:00 - 9:30 GMT					
9:30 10:00 10:30			Therapeutic Plenary Session Encore Presentation 9:30 - 11:30 GMT					
11:00 11:30			Break 11:30 - 12:00 GMT					
12:00								
12:30		Therapeutic Plenary Session	Plenary Session	Plenary	Session	Plenary	Session	Plenary Session
13:00		12:00 - 14:00 GMT	12:00 - 14:00 GMT	12:00 - 14	4:00 GMT	12:00 - 14	4:00 GMT	12:00 - 14:00 GMT
13:30								
14:00		Break MDS Business Meeting 14:00 - 14:30 GMT 14:00 - 14:30 GMT	MDS-ES Regional Assembly 14:00 - 14:30 GMT	Bre 14:00 - 14		Bre 14:00 - 14		Break 14:00 - 14:30 GMT
14:30				Parallel Sessions	Science of	Parallel Sessions	Science of	
15:00	Welcome Ceremony	Therapeutic Plenary Session	Parallel Sessions / Teaching Courses	/ Teaching Courses	Industry (non- CME) Session	/ Teaching Courses	Industry (non- CME) Session	Plenary Sessions
15:30 16:00	15:00 - 16:00 GMT	14:30 - 16:30 GMT	14:30 - 16:30 GMT	14:30 - 16:30 GMT	14:30 - 16:30 GMT	14:30 - 16:30 GMT	14:30 - 16:30 GMT	14:30 - 16:30 GMT
16:30					<i>c</i> .			
17:00		Sponsored Symposia 16:30 - 17:30 GMT	Sponsored Symposia 16:30 - 17:30 GMT	Sponsored 16:30 - 13		Sponsored 16:30 - 17		
17:30		Break 17:30 - 18:00 GMT	MDS-Africa Regional Assembly 17:30 - 18:00 GMT	Break 17:30	- 18:00 GMT	Break 17:30	- 18:00 GMT	
18:00			Skills Workshops / Special Topics	Skills Workshops		Skills Workshops		
18:30		Therapeutic Plenary Session	in Movement Disorders / Video Sessions	in Movement D Sess	ions	in Movement Di Sess	ions	
19:00		18:00 - 20:00 GMT	18:00 - 19:30 GMT	18:00 - 19	9:30 GMT	18:00 - 19	9:30 GMT	
19:30								
20:00		Break 20:00 - 20:30 GMT						
20:30			Virtual MDS Video Challenge					
21:00		Therapeutic Plenary Session	19:30 - 22:30 GMT					
21:30		20:30 - 22:30 GMT						
22:00								MDS-PAS Regional Assembly 22:30 - 23:00 GMT



VIRTUAL CONGRESS SESSION DEFINITIONS

CME Accredited Sessions

2020 Virtual Congress Themed Sessions: At each annual International Congress, the Congress Scientific Program Committee selects a theme that is highlighted throughout the meeting. This year's theme, *The Combined Multidisciplinary Approach to Movement Disorders*, will be showcased with international experts serving as faculty. Meeting participants can elect to attend any or all of these sessions. Themed sessions are designated in the program with **6**.

NEW in 2020: "Neuroscience Bridges" Plenary Session: In this session world-renowned neuroscientists provide overviews of their clinical or basic research, on topics of broad interest and relevance for the advancement of knowledge on the nervous system in physiology and pathology.

Controversies: This Plenary Session is designed to involve all Virtual Congress participants. 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.

"Highlights for 2020: Looking Towards 2021" Plenary Session: In this session MDS experts present compilations of the hottest clinical and basic research articles published in the past year in the whole field of the Movement Disorders, and expected to impact heavily on the future research.

Parallel Sessions: These concurrent sessions provide an in-depth summary of new clinical and basic research findings, state-of-the-art treatment options, and future strategies on a variety of focused topics within the field of Movement Disorders.

Plenary Sessions: These sessions provide an overview of the latest clinical and basic science research findings and state-of-the-art information relating to topics of broad interest within the field of Movement Disorders.

Skills Workshops: These concurrent sessions provide practical illustrations of clinical or scientific techniques relevant to the field of Movement Disorders through video examples and equipment demonstrations.

Special Topics in Movement Disorders: These interactive sessions address "hot" topics in science or medicine using a variety of different formats that may include lectures, video presentations, and audience interaction.

Teaching Courses: These educational programs provide up-to-date information focused on a single topic. The sessions highlight both the clinical and basic science of topics of relevance to Movement Disorder specialists. The sessions are unique in providing a syllabus that includes a review of the topic and the presentation slides.

Therapeutic Plenary Sessions: These sessions provide an overview of the latest, state-of-the-art treatment options in the diagnosis and management of Parkinson's disease and other movement disorders.

Video Sessions: These concurrent sessions focus on video demonstrations to provide an overview of clinical movement disorders.

Non-CME Accredited Educational Activities

Science of Industry Sessions: These interactive sessions will provide attendees with a non-CME educational opportunity to learn about novel therapeutic agents under development by industry. Sessions may incorporate basic scientists or clinicians working in industry, and topics may address the biological rationale or development process for specific therapeutics in development within the field of Movement Disorders.

Sponsored Symposia

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

Video Challenge

Video Challenge: The goal of this session is for attendees to learn from a series of unusual patients and observe how senior experts approach a challenging case. A world-renowned panel of Movement Disorders experts guide attendees through unique Movement Disorder cases as they are presented by representatives from Movement Disorder centers around the world.

VIRTUAL CONGRESS FACULTY ROLES

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

CSPC Liaison: Develops the session from the onset; provides guidance to ensure that the learning objectives are met; interacts with Speakers / Presenters to ensure presentations are well integrated and overlap is minimized.

Speaker / Presenter: Creates and delivers the presentation materials, and participates in the dialogue of the session.

2020 VIRTUAL CONGRESS THEME

At each annual International Congress, the Congress Scientific Program Committee selects a theme that is highlighted throughout the meeting. This year's theme is *The Combined Multidisciplinary Approach to Movement Disorders*. International experts will serve as faculty, and the meeting participants can elect to attend any or all of these sessions.

Themed sessions



FRIDAY, SEPTEMBER 11, 2020

Welcome Ceremony

15:00 - 16:00 GMT

All participants are encouraged to attend the Virtual Congress Welcome Ceremony.

SATURDAY, SEPTEMBER 12, 2020

MDS-AOS Regional Assembly

6:00 - 6:30 GMT

All participants from Asia and Oceania are encouraged to attend.

101: Therapeutic Plenary Session

Updates on Medical Management Strategies for Parkinson's Disease: Motor Aspects 12:00 - 14:00 GMT

Chairs: Matthew B. Stern, USA Pille Taba, Estonia

Early Pharmacologic Management Oscar Gershanik, Argentina

Rehabilitation Strategies Alice Nieuwboer, *Belgium*

Medical Management Strategies for Advancing Disease Patients

Regina Katzenschlager, Austria

CSPC Liaison: Shen Yang Lim, Malaysia

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Discuss current management of early-stage Parkinson's disease
- 2. Review the role of rehabilitation, including physical, occupational and speech therapies, and exercise in Parkinson's disease
- 3. Describe current medical management strategies for advancing Parkinson's disease (motor complications and other late-stage features)

MDS Business Meeting

14:00 - 14:30 GMT All participants are encouraged to attend.

102: Therapeutic Plenary Session

Parkinson's Disease: Non-Motor Aspects 14:30 – 16:30 GMT

Chairs: Angelo Antonini, *Italy*

Daniel Weintraub, USA Neuropsychiatric Features Anette Schrag, United Kingdom

Dysautonomia

Horacio Kaufmann, USA

Sleep and Fatigue Ron Postuma, Canada

CSPC Liaison: Jennifer Goldman, USA

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Describe the neuropsychiatric aspects of Parkinson's disease and their management
- 2. Discuss the recognition and management of dysautonomia in Parkinson's disease
- 3. Summarize the symptoms and management of sleep and fatigue in Parkinson's disease

103: Therapeutic Plenary Session

Therapeutic Approaches to Chorea, Dystonia, and Myoclonus

18:00 – 20:00 GMT : Francisco Cardoso, *Brazil*

Chairs: Francisco Cardoso, Braz Eduardo Tolosa, Spain

> Chorea Ruth Walker, USA

Dystonia Rachel Saunders-Pullman, USA

Myoclonus Yoshikazu Ugawa, *Japan*

CSPC Liaison: Francisco Cardoso, Brazil

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. List the therapeutics options to manage patients with different types of chorea
- 2. Discuss the therapeutic management of dystonia

3. Summarize the therapeutic options for myoclonus



SATURDAY, SEPTEMBER 12, 2020

104: Therapeutic Plenary Session

Neurosurgical Management of Movement Disorders

Chairs:

Günther Deuschl, Germany Andrea Kühn, Germany

20:30 - 22:30 GMT

Technical Advances for DBS Treatment Jens Volkmann, *Germany*

Long-term Effects of DBS on Motor and Non-motor Symptoms in Parkinson's Disease Patricia Limousin, United Kingdom

Alternative Strategies: Focused Ultrasound and Other Lesioning Techniques in Movement Disorders José Obeso, Spain

CSPC Liaison: Andrea Kühn, Germany

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- Discuss and apply new DBS techniques such as segmented leads for current steering, imaging guided programming, VTA models
- 2. Discuss indications of DBS and explain motor and non-motor benefits and risks
- 3. Discuss the pros and cons of different surgical approaches in movement disorders

SUNDAY, SEPTEMBER 13, 2020

101: Therapeutic Plenary Session (Encore Presentation)

Updates on Medical Management Strategies for Parkinson's Disease: Motor Aspects 2:00 – 4:00 GMT

Chairs: Roongroj Bhidayasiri, Thailand Shengdi Chen, Peoples Republic of China Early Pharmacologic Management Oscar Gershanik, Argentina Rehabilitation Strategies

Alice Nieuwboer, Belgium

Medical Management Strategies for Advancing Disease Patients

Regina Katzenschlager, Austria

CSPC Liaison: Shen Yang Lim, Malaysia

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- At the conclusion of this session, participants should be better able to:
- 1. Discuss current management of early-stage Parkinson's disease
- 2. Review the role of rehabilitation, including physical, occupational and speech therapies, and exercise in Parkinson's disease
- 3. Describe current medical management strategies for advancing Parkinson's disease (motor complications and other late-stage features)

	Parkinson's Disease: Non-Motor Aspects				
	4:30 – 6:30 GMT				
Chairs:	Huifang Shang, <i>Peoples Republic of China</i> Louis Tan, <i>Singapore</i>				
	Neuropsychiatric Features Anette Schrag, United Kingdom				
	Dysautonomia Horacio Kaufmann, USA				
	Sleep and Fatigue Ron Postuma, <i>Canada</i>				
CSPC Liaison:	Jennifer Goldman, USA				
	l Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Heal Students/Residents/Trainees				
1. Describe t	At the conclusion of this session, participants should be better able to: 1. Describe the neuropsychiatric aspects of Parkinson's disease and their management 2. Discuss the recognition and management of dysautonomia in Parkinson's disease 3. Summarize the symptoms and management of sleep and fatigue in				



103: Therapeutic Plenary Session (Encore Presentation)

Therapeutic Approaches to Chorea, Dystonia, and Myoclonus

Chairs:

- **Ruey-Meei Wu,** *Taiwan* Chorea
- Ruth Walker, USA
 - Dystonia

7:00 - 9:00 GMT

- Rachel Saunders-Pullman, USA
- Myoclonus Yoshikazu Ugawa, *Japan*
- CSPC Liaison: Francisco Cardoso, Brazil

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- At the conclusion of this session, participants should be better able to:
- 1. List the therapeutic options to manage patients with different types of chorea
- 2. Discuss the therapeutics management of dystonia
- 3. Summarize the therapeutic options for myoclonus

104: Therapeutic Plenary Session (Encore Presentation)

Neurosurgical Management of Movement Disorders 9:30 - 11: 30 GMT

Chairs: Ritsuko Hanajima, Japan Beomseok Jeon, South Korea

Technical Advances for DBS Treatment Jens Volkmann, Germany

Long-term Effects of DBS on Motor and Non-motor Symptoms in Parkinson's Disease

Patricia Limousin, United Kingdom

Alternative Strategies: Focused Ultrasound and Other Lesioning Techniques in Movement Disorders José Obeso, Spain

CSPC Liaison: Andrea Kühn, Germany

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- Discuss and apply new DBS techniques such as segmented leads for current steering, imaging guided programming, VTA models
- 2. Discuss indications of DBS and explain motor and non-motor benefits and risks
- 3. Discuss the pros and cons of different surgical approaches in movement disorders

Presidential Lectures 12:00 – 14:00 GMT Chairs: Francisco Cardoso, Brazil Claudia Trenkwalder, Germany Stanley Fahn Lecture Werner Poewe, Austria C. David Marsden Lecture Hiroshi Shibasaki, Japan Junior Award Lectures To Be Announced

CSPC Liaison: Vincenzo Bonifati, Netherlands Claudia Trenkwalder, Germany

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals. Students/Residents/Trainees

MDS-ES Regional Assembly

14:00 - 14:30 GMT

All participants from Europe are encouraged to attend.

301: Parallel Session

201: Plenary Session

	COVID -19 and Movement Disorders 14:30 – 16:30 GMT
Chairs:	Huifang Shang, <i>Peoples Republic of China</i> Indu Subramanian <i>, USA</i>
	Neurological Manifestations in patients with COVID-19 Elena Moro, France
	COVID-19 in Patients with Parkinson's Disease or Movement Disorders Alfonso Fasano, <i>Canada</i>
	Caring of Patients with Movement Disorders in the COVID-19 Era Esther Cubo, <i>Spain</i>

CSPC Liaison: Buz Jinnah, USA

Recommended Audience: Clinical Academicians, Practitioners Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Summarize the current knowledge about the neurological manifestations and neuropathology in subjects affected by the COVID-19
- 2. Summarize the clinical phenomenology and outcomes of the COVID-19 disease in patients with Parkinson's disease and other movement disorders
- Discuss the impact of the COVID-19 pandemic on the clinical care of patients with movement disorders, and the available strategies to ensure continuity of care and best outcomes



302: Parallel Session

	MSA and Pure Autonomic Failure 14:30 – 16:30 GMT		Update on (14:30 – 16:3
Chairs:	Howard Hurtig, <i>USA</i> Ryosuke Takahashi, <i>Japan</i>	Chairs:	Christine Klein, <i>Ge</i> Carolyn Sue, <i>Austr</i> e
	Molecular Mechanisms To Be Announced		Parkinsonism Chin-Hsien Lin, <i>Tai</i>
	The Challenge of Early Diagnosis Wassilios Meissner, <i>France</i>		Dystonia Patricia Maria Carv
	Pure / Isolated Autonomic Failure Lucy Kaufmann, <i>USA</i>		Ataxia Martin Paucar Arce
CSPC Liaison:	Pietro Cortelli, <i>Italy</i>	CSPC Liaison:	Carolyn Sue, Austra
	Ryosuke Takahashi, <i>Japan</i>	Recommended /	Audience: Clinical Acad
Recommended /	Audience: Basic Scientists, Clinical Academicians, Students/Residents/Trainees	Students/Reside	nts/Trainees

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

- 1. Discuss the role of alpha-synuclein in the initiation and progression of neurodegeneration across Parkinson's disease and atypical parkinsonism
- 2. Recognize Multiple System Atrophy at an early stage
- 3. Recognize Pure/Isolated Autonomic failure and discuss its role in predicting the onset of other synucleinopathies (MSA, DLB, PD)

303: Parallel Session 💮

Update on Functional Movement Disorders 14:30 - 16:30 GMT

Mark Edwards, United Kingdom Chairs: Mark Hallett, USA

Phenomenology

Francesca Morgante, United Kingdom

Electrophysiology and Imaging Tereza Serranova, Czech Republic

Psychological Aspects to Aetiology and Management Timothy Nicholson, United Kingdom

CSPC Liaison: Beomseok Jeon, South Korea

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Recognize the phenomenology of functional movement disorders
- 2. Summarize the electrophysiological and imaging features of functional movement disorders
- 3. Discuss the psychopathology and management of functional movement disorders

304: Parallel Session

Genetics of Movement Disorders 30 GMT ermany

- tralia
 - aiwan
 - rvalho Aguiar, *Brazil*
 - ce, Sweden

ralia

demicians, Practitioners, Non-Physician Health Professionals,

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

- 1. Summarize recently identified genes related to Parkinson's disease and parkinsonism
- 2. Summarize recently identified genes related to dystonia
- 3. Summarize recently identified genes related to ataxia

305: Parallel Session

Chairs:	Heterogeneity of Parkinson's Disease: Clinical Phenotypes and Progression 14:30 – 16:30 GMT Nabila Dahodwala, USA Connie Marras, Canada		
	Influence of the Genetic Determinants Clemens Scherzer, USA		
	Role of Environment, Lifestyle and Comorbidities Connie Marras, Canada		
	Lessons from Large Cohort Studies Rodolfo Savica, USA		
CSPC Liaison:	Claudia Trenkwalder, <i>Germany</i>		

Claudia Irenkwalder, Germany

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Students/Residents/ Trainees

- 1. Discuss the influence of different genetic variants (rare/Mendelian, intermediateeffects variants such as GBA and LRRK2-G2019S, and common GWAS variants) on phenotypes and progressions of Parkinson's disease
- 2. Discuss the influence of environment, diet, exercise, comorbidities and inflammation on the heterogeneity of Parkinson's disease
- 3. Discuss the potential of ongoing large longitudinal cohorts-studies to understand Parkinson's disease heterogeneity



306: Parallel Session

Huntington's Disease Continuum and Non-Huntington's Choreas 14:30 – 16:30 GMT

Chairs: Joaquim Ferreira, Portugal Amanda Krause, South Africa

The Natural History of Huntington's Disease G. Bernhard Landwehrmeyer, *Germany*

When Genetic Testing is Negative: Huntington's Phenocopies

Amanda Krause, South Africa

A Critical Appraisal of Clinical Trials in Huntington's Disease Joaquim Ferreira, Portugal

Joaquini Terrena, Torrag

CSPC Liaison: Francisco Cardoso, Brazil

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Discuss the natural history of Huntington's Disease
- 2. List the differential diagnosis of Huntington's Disease phenocopies
- 3. Appraise recent clinical trials in Huntington's Disease

401: Teaching Course

Cognitive and Psychiatric Issues in the Parkinsonian Spectrum 14:30 – 16:30 GMT

Chairs: Cristian Falup-Pecurariu, *Romania* James Morley, *USA*

> Apathy: Why, Who, and What to Do About It Marcelo Merello, Argentina

It's Not Just MCI / Dementia: The Many Cognitive Changes in Parkinsonism Madeleine Sharp, *Canada*

Parkinson's Disease Treatments: How do They Change Neuropsychiatric Symptoms? Daniel Weintraub, USA

CSPC Liaison: Ron Postuma, Canada

Recommended Audience: Clinical Academicians, Practitioners, Students/Residents/Trainees

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

- 1. Discuss the pathophysiology, disease spectrum and management of apathy in parkinsonian conditions
- Evaluate the broad spectrum of non-dementia cognitive changes in parkinsonian conditions
- 3. Differentiate treatment vs. disease-related effects on neuropsychiatric symptoms in Parkinson's disease

402: Teaching Course

Dystonia, Ataxia, and Tics 14:30 – 16:30 GMT

Chairs: Cynthia Comella, USA Susanne Schneider, Germany

> My Approach to Dystonia Susanne Schneider, Germany

> > My Approach to Ataxia José Luiz Pedroso, *Brazil*

My Approach to Tic Disorders Tamara Pringsheim, *Canada*

CSPC Liaison: Ron Postuma, Canada

Recommended Audience: Clinical Academicians, Practitioners, Students/Residents/Trainees

- At the conclusion of this session, participants should be better able to:
- 1. Describe the phenomenology and diagnostic approach to dystonia
- 2. Describe the phenomenology and diagnostics approach to ataxia
- 3. Summarize the phenomenology and diagnostic approach to tic disorders

MDS-Africa Regional Assembly

17:30 - 18:00 GMT

All participants from the African continent are encouraged to attend.

501: Skills Workshop 🚮

A Multidisciplinary Approach for Palliative Care 18:00 – 19:30 GMT

This session aims to help providers identify and manage palliative care needs, collaborate with other

allied healthcare team members, and develop advance care planning with patients, families and their caregivers.

Stefan Lorenzl, *Germany* Janis Miyasaki, *Canada*

CSPC Liaison: Claudia Trenkwalder, Germany

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Recognize the relevance of palliative care in movement disorders
- 2. Develop a multidisciplinary approach to the management of patients in advanced care



502: Skills Workshop 👘

DBS and Functional Communication in Parkinson Disease: Insights and Intervention 18:00 – 19:30 GMT

In this interactive session, the faculty will examine the impact of deep brain stimulation on speech intelligibility in Parkinson's disease. Evidence-based interventions will be compared to optimize functional communication.

> Elina Tripoliti, *United Kingdom* Michelle Troche, *USA*

CSPC Liaison: Terry Ellis, USA

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Examine the impact of deep brain stimulation on speech intelligibility in Parkinson's disease
- 2. Compare treatment strategies to optimize functional communication in Parkinson's disease

503: Skills Workshop

Imaging in Movement Disorders 18:00 – 19:30 GMT

In this interactive session, the faculty will review the nuts and bolts of how radioisotope imaging, MRI, and ultrasonography are used for diagnosis and prognostication in movement disorders.

> Marios Politis, United Kingdom Klaus Seppi, Austria

CSPC Liaison: Per Borghammer, Denmark

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Describe how PET and SPECT are used for the diagnosis, prognostication, and as progression markers of movement disorders
- Describe the application of anatomical and functional MRI, and ultrasonography in the diagnosis, prognostication, and as progression markers of movement disorders

504: Skills Workshop

Phenomenology of Movement Disorders for Young Neurologists: Semiological Tricks and Pitfalls 18:00 – 19:30 GMT

In this interactive session, the faculty will discuss tricks and maneuvers they employ in clinical practice for the detection and examination of Movement Disorders.

> Mona Obaid, *Saudi Arabia* Mayela Rodriguez Violante, *Mexico*

CSPC Liaison: Oscar Gershanik, Argentina

Recommended Audience: Practitioners, Students/Residents/Trainees

- At the conclusion of this session, participants should be better able to:
- 1. Explore the phenomenology of Movement Disorders
- 2. Apply semiological tricks to better detect and examine Movement Disorders

601: Special Topics in Movement Disorders

Big Data Analytics in Clinical Research for Movement Disorders 18:00 – 19:30 GMT

In this session the Faculty will discuss the impact of big data analytics in the current clinical research on Parkinson's disease and other movement disorders, as well as the potential implications of the research findings in the clinical management.

> lvo Dinov, USA Allison Willis, USA

CSPC Liaison: Roongroj Bhidayasiri, Thailand

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Students/Residents/ Trainees

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

- 1. Describe the concept of big data analytics and the impact in clinical research in the field of movement disorders
- 2. Discuss findings from studies based on big data analytics, and their potential implications in the clinical management

602: Special Topics in Movement Disorders

Revisiting the Role of Non-Neuronal Cells in Parkinson's Disease 18:00 – 19:30 GMT

In this interactive session, the faculty will discuss recent data suggesting that brain non-neuronal cells, including glial and inflammatory cells, are involved in the pathogenesis and pathophysiology of Parkinson's disease.

To Be Announced David Sulzer, USA

CSPC Liaison: Etienne Hirsch, France

Recommended Audience: Basic Scientists, Clinical Academicians, Students/Residents/Trainees

- At the conclusion of this session, participants should be better able to:
- 1. Discuss the roles for non-neuronal cells in the pathophysiology of Parkinson's disease
- 2. Describe the putative roles for non-neuronal cells in the pathogenesis

701: Video Session

Gait Disorders 18:00 – 19:30 GMT

In this interactive session, participants will gain knowledge on different gait disorders through illustrative videos. Key features of gait disorders and different treatment strategies will be discussed, including surgical interventions.

> Nir Giladi, *Israel* Evzen Ruzicka, *Czech Republic*

CSPC Liaison: Andrea Kühn, Germany

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Review the clinical features of normal gait and recognize key abnormalities of gait disorders
- Recognize specific dysfunction in gait disorders, discuss differential diagnosis and the respective therapeutic management



702: Video Session

Tardive Syndromes and Other Drug Induced Movement Disorders 18:00 – 19:30 GMT

In this interactive session, the faculty will demonstrate iatrogenic movement disorders in a case-based format, highlighting acute, chronic, and tardive syndromes, emphasizing phenotypic features that can be overlooked or misattributed to other disorders. Pearls and pitfalls of drug-related complications will be discussed.

Hubert Fernandez, USA Deborah Hall, US

CSPC Liaison: Alberto Espay, USA

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- Recognize typical and atypical forms of tardive syndromes and distinguish from mimics
- 2. Identify clinical clues associated with drug-induced movement disorders

MDS Video Challenge (non CME)

19:30 - 22:30 GMT

Please join Masters of Ceremony Anthony Lang and Kapil Sethi as they host world-renowned Movement Disorders experts in guiding participants through unique Movement Disorder cases. The cases will be presented by representatives from Movement Disorder Centers around the world and discussed by Movement Disorder Experts. Awards will be given for the most interesting and challenging cases. Country pride will add an enjoyable spirit of competition to this event. The goal of this session is for participants to learn from a series of unusual, very interesting patients and see how senior experts approach these types of challenging cases.

Featured Experts:

Bettina Balint, United Kingdom Orlando Barsottini, Brazil Kailash Bhatia, United Kingdom Francisco Cardoso, Brazil Roberto Erro, Italy Alberto Espay, USA Alfonso Fasano, Canada Jennifer Friedman, USA Victor Fung, Australia Christos Ganos, Germany Dan Healy, Ireland Marina Koning-Tijssen, Netherlands Manju Kurian, United Kingdom Tim Lynch, Ireland Werner Poewe, Austria Stephen Reich, USA Maria Stamelou, Greece



MDS Video Challenge (Encore Presentation)

2:00 - 5:00 GMT

Please see page page 15 for complete description.

202: Plenary Session

Treatable, Rare Movement Disorders Not to Miss

12:00 – 14:00 GMT

Chairs: Victor Fung, *Australia* Mayela Rodriguez-Violante, *Mexico*

> Clinical Approach Jennifer Friedman, USA

Diagnostic Workup Manju Kurian, *United Kingdom*

Current and Future Treatments Buz Jinnah, USA

CSPC Liaison: Maria Stamelou, Greece

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- At the conclusion of this session, participants should be better able to:
- 1. Appraise clinically a patient with a suspected treatable, rare movement disorder and recognize clinical clues not to be missed
- 2. Decide, determine and interpret the necessary investigations for a patient with a suspected treatable, rare movement disorder
- Apply current therapies and identify upcoming new therapy options for rare movement disorders

203: Plenary Session 🐐

Parkinson's Disease Biomarkers: A Multidisciplinary Approach 12:00 – 14:00 GMT

Chairs: Per Borghammer, Denmark Andrew Siderowf, USA

Update on Imaging Biomarkers for Parkinson's Disease A. Jon Stoessl, Canada

Clinical Utility of Fluid Biomarkers for Parkinson's Disease Brit Mollenhauer, Germany

Peripheral Pathology as a Parkinson's Disease Biomarker Charles Adler, USA

CSPS Liaison: Andrew Siderowf, USA

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Evaluate the clinical value of imaging biomarkers, including emerging PET and SPECT ligands and MRI
- 2. Describe current status of biochemical biomarkers for Parkinson's disease
- Summarize recent developments in peripheral tissue assays for alpha-synuclein pathology in Parkinson's disease

307: Parallel Session 👘

Innovative Models in the Integrated Management of Parkinson's Disease 14:30 – 16:30 GMT

Chairs: Bastiaan Bloem, Netherlands

Terry Ellis, USA

Interdisciplinary Team Models of Care in Parkinson's Disease

Jennifer Goldman, USA

An Integrated Telemedicine Approach in Parkinson's Disease

Mark Guttman, Canada

Integrated Palliative Care in Parkinson's Disease: Timing Matters

Maya Katz, USA

CSPC Liaison: Terry Ellis, USA

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Describe interdisciplinary team models of care to optimize the management of Parkinson's disease
- 2. Discuss innovative models on integrated care using telehealth in Parkinson's disease
- 3. Describe a palliative care model integrated over the disease continuum in Parkinson's disease

308: Parallel Session 👘

Chairs:

Sleep Disorders in Parkinsonism: Science and Clinical Aspects

14:30 – 16:30 GMT

Roongroj Bhidayasiri*, Thailand* Ron Postuma*, Canada*

> Basic Science Aspects of RBD To Be Announced

Clinical Aspects of RBD Ambra Stefani, Austria

Sleep Disorders in Atypical Parkinsonism Federica Provini, *Italy*

CSPC Liaison: Per Borghammer, Denmark

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Describe the pathophysiology and neuropathology underlying RBD
- 2. Describe clinical manifestations of RBD, their relationship with other clinical features, and management
- 3. Describe prominent sleep disorders in atypical parkinsonisms, their relation with other clinical features, and management



309: Parallel Session

Update on Recent Clinical Trials 14:30 – 16:30 GMT

Chairs: Hubert Fernandez, USA Oscar Gershanik, Argentina

> Parkinson's Disease Tatyana Simuni, USA

Atypical Parkinsonian Disorders Günter Höglinger, Germany

Huntington's Disease Blair Leavitt, *Canada*

CSPC Liaison: Wassilios Meissner, France

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Discuss recent clinical trials in Parkinson's disease
- 2. Review recent clinical trials for atypical parkinsonian disorders
- 3. Discuss recent clinical trials for hyperkinetic movement disorders

310: Parallel Session

The Crossroads of Spasticity and Ataxia

14:30 – 16:30 GMT Chairs: Orlando Barsottini, *Brazil*

Brent Fogel, USA

Clinical Syndromes and Diagnostic Evaluation To Be Announced Biological Basis Brent Fogel, USA

Management Carlos Henrique Camargo, *Brazil*

CSPC Liaison: Buz Jinnah, USA

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Describe the clinical features and diagnostic workup of syndromes that feature spasticity and ataxia
- 2. Summarize the pathogenesis of spasticity and ataxia
- 3. Describe management strategies for clinical syndromes that combine spasticity and ataxia

311: Parallel Session

Advanced Multi-Modal Imaging and Big Imaging Data in Parkinson's Disease 14:30 – 16:30 GMT

Chairs: A. Jon Stoessl, *Canada* Antonio Strafella, *Canada*

Multi-Modal Imaging of the Braak Stages and Parkinson's Disease Subtypes

Per Borghammer, Denmark

Multi-Modal Imaging for Diagnosis, Prognosis and Progression

Jee-Young Lee, South Korea

Simulating Parkinson's Disease in Computer Models and Using A.I. for Big Imaging Data Alain Dagher, *Canada*

CSPC Liaison: Per Borghammer, Denmark

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Describe how multi-modal imaging enables visualization of damage to distinct neurotransmitter systems in Parkinson's disease
- 2. Describe how multi-modal MRI and other imaging techniques are used for diagnosis, prognostication, and as progression markers
- 3. Describe computer simulations of Parkinson's disease and how artificial intelligence algorithms allow in-depth analysis of very large imaging datasets

403: Teaching Course 💮

Atypical Parkinsonisms: Clinical Overview 14:30 – 16:30 GMT

Chairs: Carlo Colosimo, *Italy* John Duda, *USA* PSP/CBD

> Marina Picillo, *Italy* MSA Han-Joon Kim, *South Korea*

Clinical Look-Alikes Kailash Bhatia, United Kingdom

CSPC Liaison: Ron Postuma, Canada

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Evaluate the clinical spectrum and imaging features of PSP/CBS
- 2. Evaluate the clinical spectrum and imaging features of MSA
- 3. Discuss the disorders which can clinically mimic PSP, CBD, and MSA



404: Teaching Course

Update on Neurosurgery for Movement Disorders 14:30 – 16:30 GMT

Chairs: Elena Moro, France

Steve Tisch, Australia

DBS for Parkinson's Disease: Who, Where, and How? Steve Tisch, Australia

DBS for Dystonia: Who, Where, and How? Andrea Kühn, *Germany*

DBS and Lesioning in Tremor Günther Deuschl, Germany

CSPC Liaison: Ron Postuma, Canada

Recommended Audience: Basic Scientists, Clinical Academicians, Students/Residents/Trainees

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

- 1. Identify good candidates for DBS surgery in PD, the best surgical target, and novel types of segmented lead technology
- 2. Identify good candidates for DBS in dystonia, the outcome over the long term, and novel types of adaptive stimulation
- 3. Identify how to select candidates for surgery in tremor, how to use DBS, and when surgical vs. ultrasound lesioning should be used

901: Science of Industry (non-CME)

Antisense Oligonucleotides for Treating Movement Disorders 14:30 – 16:30 GMT See page page 26 for complete session information.

505: Skills Workshop

Managing Comorbidities and Polypharmacy Issues in Parkinson's Disease 18:00 – 19:30 GMT

In this interactive session, the faculty will discuss common comorbidities and the polypharmacy these lead to in the management of Parkinson's disease.

David Burn, *United Kingdom* Tove Henriksen, *Denmark*

CSPC Liaison: Tove Henriksen, Denmark

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Recognize the most common comorbidities in Parkinson's disease
- 2. Manage the comorbidities and the related polypharmacy in Parkinson's disease

506: Skills Workshop

Botulinum Toxins: A Case-Based Approach 18:00 – 19:30 GMT

In this interactive session, the faculty will use a case-based approach to describe the use of botulinum toxins for the most common forms of dystonia and spasticity.

Carlo Colosimo, *Italy* Andres Deik, *USA*

CSPC Liaison: Buz Jinnah, USA

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- Describe optimal strategies for the application of botulinum toxins for the more common forms of dystonia such as cervical dystonia, blepharospasm, and limb dystonia
- Describe the optimal strategies for the application of botulinum toxins for the treatment of the more common forms of spasticity affecting the upper and lower limb

507: Skills Workshop

New Perspectives on Phenotype-Genotype Relationships 18:00 – 19:30 GMT

In this interactive session, faculty will describe various types of genotype-phenotype relationships, how to apply genetic testing for diagnosis in different movement disorders, and several online tools available for understanding the outcomes of genetic testing.

Pedro Gonzalez-Alegre, USA Joanne Trinh, *Germany*

CSPC Liaison: Buz Jinnah, USA

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Describe the sometimes complex relationships between various genotypes and their associated phenotypes
- 2. Describe some of the tools available to help the clinician make better use of the results of genetic testing for diagnosis



603: Special Topics in Movement Disorders 🍯

Physical Exercise and Parkinson's Disease 18:00 – 19:30 GMT

In this interactive session, the faculty will discuss the role of physical exercise in modifying the risk of developing Parkinson's disease and the disease progression.

> Terry Ellis, USA Priya Jagota, *Thailand*

CSPC Liaison: Beomseok Jeon, South Korea

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

1. Discuss the role of physical exercise in modifying the risk for developing Parkinson's disease

2. Discuss the role of exercise in modifying Parkinson's disease progression

604: Special Topics in Movement Disorders 🕤

Setting Up Your Telemedicine Clinic 18:00 – 19:30 GMT

In this interactive session, participants will gain practical knowledge on the resources needed to set up a telemedicine clinic. Faculty will also discuss both the advantages and disadvantages of this interface for delivery of care and highlight obstacles, potential pitfalls, and opportunities for future enhancements.

> Piu Chan, *People's Republic of China* Nijdeka Okubadejo, *Nigeria* Meredith Spindler, *USA*

CSPC Liaison: Alberto Espay, USA

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Apply readily available technology resources into an interface for telemedicine
- 2. Recognize the challenges and opportunities of a telemedicine clinic

605: Special Topics in Movement Disorders

How to Become a Successful Movement Disorders Specialist 18:00 – 19:30 GMT

In this interactive session, participants will gain insight on the best approaches to pursue a career in Movement Disorders.

Beomseok Jeon, *South Korea* To Be Announced

CSPC Liaison: Oscar Gershanik, Argentina

Recommended Audience: Students/Residents/Trainees

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

- Choose the right career path, and acquire the necessary skills to become a successful Movement Disorders Specialist
- 2. Recognize the importance of searching for good mentors when pursuing specialization

703: Video Session

Eye Movement Disorders 18:00 – 19:30 GMT

In this interactive session, attendees will learn bedside examination techniques, recognize categories of abnormal eye movements, and become familiar with ocular and oculomotor abnormalities in many movement disorders.

> Tim Anderson, New Zealand Joyce Liao, USA

CSPC Liaison: Shen Yang Lim, Malaysia

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Undertake a bedside neuro-opthalmological examination relevant to movement disorders
- Describe characteristic clinical ocular and eye movement abnormalities that aid diagnosis in common and uncommon movement disorders

704: Video Session

Movement Disorder Emergencies 18:00 – 19:30 GMT

In this interactive session, the faculty will show videos of hypokinetic and hyperkinetic movement disorder emergencies, and discuss the practical management of these conditions

> Steven Frucht, USA Asha Kishore, India

CSPC Liaison: Roongroj Bhidayasiri, Thailand

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Recognize clinical settings and signs of hypokinetic and hyperkinetic movement disorder emergencies, including those related to device-aided therapies
- 2. Outline management strategies of various movement disorder emergencies



204: Plenary Session		313: Parallel Session		
	Neuroscience Bridges 12:00 – 14:00 GMT		Essential Tremor, Dystonia and Their Relationships	
Chairs:	Vincenzo Bonifati, <i>Netherlands</i> Etienne Hirsch, <i>France</i>	Chairs:	14:30 – 16:30 GMT Kailash Bhatia, <i>United Kingdom</i>	
Speakers:	Karl Deisseroth <i>, USA</i> Beth Stevens <i>, USA</i>		Louis Tan, <i>Singapore</i> The Phenotypic Spectrum of Essential Tremor-Plus	
CSPC Liaison:	Vincenzo Bonifati, <i>Netherlands</i> Etienne Hirsch, <i>France</i>		Syndromes Franziska Hopfner, <i>Germany</i>	
	Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health :udents/Residents/Trainees		The Phenotypic Spectrum of Tremor in Dystonias Aasef Shaikh, <i>USA</i>	
	<u>~</u>		Differentiating Essential Tremor-Plus and Dystonic	

312: Parallel Session 🛛 👘

Chairs:

The Evolving Spectrum of Movement Disorder Tauopathies 14:30 – 16:30 GMT

Adam Boxer, USA

Maria Stamelou, Greece Clinical Spectrum

Maria Stamelou, Greece

Biomarkers James Rowe, United Kingdom

Therapeutic Pipeline

Adam Boxer, USA

CSPC Liaison: Wassilios Meissner, France

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Recognize the spectrum of movement disorder tauopathies
- 2. Discuss biomarkers for movement disorder tauopathies
- 3. Describe the therapeutics pipeline for movement disorder tauopathies

Differentiating Essential Tremor-Plus and Dystonic Tremor: Neurophysiological Tools Maja Kojovic, *Slovenia*

CSPC Liaison: Marisa Stamelou, Greece

Recommended Audience: Clinical Academicians, Practitioners, Students/Residents/Trainees

- At the conclusion of this session, participants should be better able to:
- 1. Describe and recognize the phenotypic spectrum of essential tremor-plus syndromes
- 2. Examine and identify the characteristics of tremor in a patient with dystonia
- 3. Evaluate neurophysiological tools for the differential diagnosis of essential tremor and dystonia syndromes

314: Parallel Session

Microbiome and the Gut-Brain Axis

	14:30 – 16:30 GMT
Chairs:	Carolyn Sue, Australia
	Ruey-Meei Wu, <i>Taiwan</i>

The Gut Microbiome in Health and Disease To Be Announced

The Gut Microbiome in the Pathogenesis of Parkinson's

Disease Heinz Reichmann, *Germany*

Perspectives for Clinical Management Ai Huey Tan, Malaysia

CSPC Liaison: Carolyn Sue, Australia

Recommended Audience: Basic Scientists, Clinical Academicians, Students/Residents/Trainees

- 1. Summarize the scientific evidence for the role of the gut microbiome in health and disease
- 2. Appraise animal studies investigating the role of the gut microbiome in the pathogenesis of Parkinson's disease
- 3. Appraise clinical studies investigating the role of the gut microbiome in the pathogenesis of Parkinson's disease



315: Parallel Session

DNA Repeat Expansions: Old and New Forms 14:30 – 16:30 GMT

Chairs: To Be Announced

Henry Paulson, USA Genotypes and Phenotypes To Be Announced Molecular Mechanisms Henry Paulson, USA

Emerging Therapeutics Avenues Edward Wild, United Kingdom

CSPC Liaison: Jennifer Friedman, USA

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Recognize the genetic and clinical spectrum of repeat expansions in movement disorders
- 2. Describe the molecular mechanisms of repeat expansion disorders
- 3. Describe the emerging therapeutic avenues for repeat expansion disorders

316: Parallel Session

Dementia with Lewy Bodies (DLB) 14:30 – 16:30 GMT

Chairs: To Be Announced

Karen Marder, USA

Genetics Insights to the Pathogenesis Rita Guerreiro, United Kingdom

Imaging Kejal Kantarci, USA

Diagnosis and Management To Be Announced

CSPC Liaison: Karen Marder, USA

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Recognize the role of genetic variants in the pathogenesis of Lewy Body disorders
- 2. Discuss the role of imaging in differential diagnosis of Lewy Body disorders
- 3. Identify multidisciplinary approaches to Lewy Body disorders

317: Parallel Session

Gene-driven Therapies Under Development for Parkinson's Disease 14:30 – 16:30 GMT

Chairs: Etienne Hirsch, France

Dan Kremens, USA

At the Crossroads Between Gaucher's and Parkinson's Disease

Ellen Sidransky, USA

LRRK2 Inhibition as a Target for Intervention in Parkinson's Disease Elisa Greggio, USA

Alpha-synuclien Aggregation as a Target for Therapeutic Intervention Daniel Otzen, Denmark

CSPC Liaison: Tiago Outeiro, Germany

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Students/Residents/ Trainees

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

- 1. Discuss the role of GBA1 as a genetic risk factor and target for intervention in Parkinson's disease
- 2. Discuss the current status of LRRK2 inhibition as a therapeutic strategy for Parkinson's disease
- 3. Compare different possible therapeutic strategies targeting alpha-synuclein aggregation

405: Teaching Course 👘

Parkinson's Disease Biomarkers 14:30 – 16:30 GMT

Chairs: Shengdi Chen, *People's Republic of China* Brit Mollenhauer, *Germany*

What Makes a Good Biomarker? Michele Hu, United Kingdom

Key Updates in Fluid and Tissue Biomarkers of Parkinson's Disease Alice Chen-Plotkin, USA

Key Updates in Imaging Biomarkers Kathleen Poston, USA

CSPC Liaison: Ron Postuma, Canada

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Discuss different types and uses of biomarkers in Parkinson's disease
- 2. Summarize key updates in the field of Parkinson's disease fluid and tissue biomarkers
- 3. Summarize updates in the field of Parkinson's disease neuroimaging biomarkers



406: Teaching Course

Chairs:

Autonomic Disturbances in Movement Disorders 14:30 – 16:30 GMT

Pietro Cortelli*, Italy* David Goldstein*, USA*

Physiology and Pathophysiology David Goldstein, USA

Clinical Evaluation and Diagnostic Tests Valeria lodice, United Kingdom

Management Pietro Cortelli, *Italy*

CSPC Liaison: Ron Postuma, Canada

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Recognize the important movement disorders associated with autonomic dysfunction
- 2. Discuss clinical testing for autonomic dysfunction in movement disorders
- 3. Evaluate pathophysiology and treatment options for autonomic dysfunction in movement disorders

902: Science of Industry (non-CME)

Immunotherapy for Proteinopathies

14:30 - 16:30 GMT

See page page 26 for complete session information.

508: Skills Workshop

Genetic Testing, Counseling and Ethical Issues 18:00 – 19:30 GMT

In this interactive session, the faculty will discuss basic issues regarding genetic testing and counseling for movement disorders, including the rationale, process, challenges and ethical concerns, such as privacy and testing minors, that may arise. Faculty will provide insights regarding ethical aspects of genetics in movement disorders in the next generation sequencing era. Case examples will be used to illustrate the pros and cons of genetic testing, ethical considerations, and challenges faced by clinicians, geneticists, and patients and their families.

> Roy Alcalay, USA Christine Klein, Germany Avi Orr-Urtreger, Israel

CSPC Liaisons: Jennifer Goldman, USA Karen Marder, USA

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Discuss genetic testing and counseling for movement disorders, including the "when, what, why, and how"
- 2. Recognize the ethical issues relevant to genetic testing and the management of patients with movement disorders

509: Skills Workshop

How to Use the MDS-UPDRS 18:00 – 19:30 GMT

In this interactive session, movement disorders experts will facilitate the understanding of participants on the core elements of the MDS-UPDRS and enable them to become fluent in the grading system. Participants will have an opportunity to practice on test cases and determine how to use this standardized measure to optimize clinical and research evaluations, train others in a standardized assessment of Parkinson's disease, and increase communication amongst providers.

> Emilia Gatto, *Argentina* Matej Skorvanek, *Slovakia*

CSPC Liaison: Veronica Santini, USA

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Evaluate patients and participants in clinical and research settings with the MDS-UPDRS
- 2. Practice using the MDS-UPDRS through interactive exercises and test cases

510: Skills Workshop

Lessons From My Patients

18:00 – 19:30 GMT

Session Description: In this interactive session, experienced clinical specialists will discuss important lessons they have learned from patients, analyzing the important clinical features of the history and examination that aided in the diagnosis, as well as pitfalls of the evaluation process. Faculty will also discuss approaches to management and key features that assist in determining appropriate strategies.

Cynthia Comella, USA Marie Vidailhet, France

CSPC Liaisons: Tove Henriksen, *Denmark* Veronica Santini, *USA*

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Interpret and critique the pertinent historical and examination elements that may be advantageous when diagnosis and management are elusive
- 2. Identify common pitfalls in the evaluation of movement disorders



606: Special Topics in Movement Disorders 🛛 🏫

Autonomic Dysfunction: Pathophysiology and Advanced Testing 18:00 – 19:30 GMT

In this interactive session, the pathophysiology and advanced methods for investigating, diagnosing and imaging cardiovascular, gastrointestinal and urogenital systems in Parkinson's disease and atypical parkinsonism will be illustrated. Participants will be able to discuss the relevance of advanced diagnostic techniques to define and manage neurogenic orthostatic hypotension, gastrointestinal and urogenital dysfunctions.

> Ryuji Sakakibara, *Japan* Paola Sandroni, *USA*

CSPC Liaison: Pietro Cortelli, *Italy*

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Assess the pathophysiology of neurogenic orthostatic hypotension, gastrointestinal and urogenital autonomic dysfunctions
- 2. Interpret the results of advanced investigations for planning appropriate management of these autonomic dysfunctions

607: Special Topics in Movement Disorders

IPCs and Organoids for Parkinson's Disease 18:00 – 19:30 GMT

In this session, the technology of induced pluripotent stem cells (iPS) and brain organoids as innovative tools for Parkinson's disease modeling and development of novel therapies will be discussed.

Wado Akamatsu, *Japan* Eng-King Tan, *Singapore*

CSPC Liaison: Ryosuke Takahashi, Japan

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Students/Residents/ Trainees

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

- 1. Illustrate the application of human pluripotent stem cell technology and brain organoids to study the molecular mechanisms of Parkinson's disease
- Discuss the potential of human pluripotent stem cell and organoid technologies for the development of novel therapies for Parkinson's disease

608: Special Topics in Movement Disorders

Metals and Calcium in my Brain 18:00 – 19:30 GMT

In this interactive session the presenters will discuss clinical and imaging aspects of movement disorders related to iron, copper, manganese, and calcium brain accumulation. The audience will learn important tips to clinically distinguish different forms of these disorders and the available treatment options.

> Annu Aggarwal, *India* Miryam Carecchio, *Italy*

CSPC Liaison: Orlando Barsottini, Brazil

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Discuss the phenotypic spectrum of movement disorders associated with brain metal accumulations
- 2. Recognize different imaging hallmarks of these disorders

609: Special Topics in Movement Disorders

Nutrition and Microbiome in Health and Neurodegenerative Disease 18:00 – 19:30 GMT

In this interactive session, faculty will discuss nutrition and the microbiome in health and disease. They will present research on nutrition and dietary patterns and their effects on maintaining health and the development of disease, cognitive decline, and parkinsonism. Faculty will discuss the microbiome and how it relates to the pathogenesis of Parkinson's disease, different fecal and blood microbiota in animal and human models, and implications for research and clinical care.

> John Duda, USA Qin Xiao, People's Republic of China

CSPC Liaison: Jennifer Goldman, USA

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- At the conclusion of this session, participants should be better able to:
- 1. Describe how nutrition and different dietary patterns influence both health and disease
- 2. Discuss the role of the microbiome in the pathogenesis of Parkinson's disease, highlighting evidence from animal models to human studies

705: Video Session

Pediatric Hyperkinetic Movement Disorders: Approach to a Child who Moves Too Much 18:00 – 19:30 GMT

In this interactive session, the presenters will demonstrate with illustrative videos the wide phenotypic spectrum of hyperkinetic pediatric movement disorders. The audience will also observe video cases of potentially treatable hyperkinetic pediatric movement disorders that are important not to miss.

> Serena Galosi*, Italy* Toni Pearson*, USA*

CSPC Liaisons: Orlando Barsottini, *Brazil* Jennifer Friedman, *USA*

Recommended Audience: Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Describe the phenotypic spectrum of hyperkinetic movement disorders in children
- 2. Recognize potentially treatable hyperkinetic pediatric movement disorders



WEDNESDAY, SEPTEMBER 16, 2020

205: Plenary Session 👘

Digital Health Technologies in Movement Disorders 12:00 – 14:00 GMT

Chairs: Roongroj Bhidayasiri, *Thailand* Christopher Goetz, *USA* Digital Health Technologies: The Toolbox in 2020 Walter Maetzler, *Germany*

Digital Technologies for Diagnosis and Disease Monitoring

Bastiaan Bloem, Netherlands

Digital Health Pathway for Personalized and Integrated Care Alberto Espay, USA

CSPC Liaison: Roongroj Bhidayasiri, Thailand

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Summarize the digital health technologies available for research and clinical care of movement disorders
- 2. Discuss opportunities and challenges of digital health technologies for diagnosis and disease monitoring in clinical trials and patients management
- 3. Discuss the concept of digital health pathway for patient-centered integrated care

206: Plenary Session

Translational Insights into New Parkinson's Disease-Modifying Therapies 12:00 – 14:00 GMT

Chairs: Joseph Jankovic, USA

Tiago Outeiro, Germany

Lysosomal Dysfunction in Parkinson's Disease: From Genetics to the Bedside

Leonidas Stefanis, Greece

The Immune System as a Target for Intervention in Parkinson's Disease Malu Tansey, USA

Antibody-Based Therapies: Present and Future Eliezer Masliah, USA

CSPC Liaison: Tiago Outeiro, Germany

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

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

- 1. Discuss the potential of lysosome-targeted therapies in Parkinson's disease
- 2. Discuss the role of the immune system as a target for intervention in Parkinson's disease
- 3. Summarize the status of antibody-based therapies for Parkinson's disease

	Controversies in Movement Disorders 14:30 - 15:30 GMT
Chairs:	Tove Henriksen, <i>Denmark</i> Irene Litvan, <i>USA</i>
	Antibodies Panels are Under-Utilized in Movement Disorders Diagnosis (YES) Bettina Balint, <i>United Kingdom</i>
	Antibodies Panels are Under-Utilized in Movement Disorders Diagnosis (NO) Francisco Cardoso, <i>Brazil</i>
	Clinical Judgement vs. A.I. Algorithms: A.I. Will Outperform the Clinical Neurologist in the Near Future (YES) Program Philosophi Theiland
	Roongroj Bhidayasiri, <i>Thailand</i>
	Clinical Judgement vs. A.I. Algorithms: A.I. Will

Outperform the Clinical Neurologist in the Near Future (NO)

Christopher Goetz, USA

CSPC Liaison: Vincenzo Bonifati, Netherlands

207: Plenary Session

Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees

- 1. Debate the advantages and disadvantages of antibodies panels in movement disorders diagnosis
- 2. Debate whether artificial intelligence will outperform clinical judgement in the near future





WEDNESDAY, SEPTEMBER 16, 2020

208: Plenary Session

Highlights from 2020: Looking Toward 2021 15:30 – 16:30 GMT

Chairs: Vincenzo Bonifati, Netherlands Claudia Trenkwalder, Germany Basic Science: Parkinson's Disease Ryosuke Takahashi, Japan Basic Science: Other Movement Disorders Carolyn Sue, Australia Clinical Studies: Parkinson's Disease Shen Yang Lim, Malaysia Clinical Studies: Other Movement Disorders Orlando Barsottini, Brazil CSPC Liaisons: Vincenzo Bonifati, Netherlands Claudia Trenkwalder, Germany Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Non-Physician Health Professionals, Students/Residents/Trainees At the conclusion of this session, participants should be better able to:

- 1. Critically review high-impact scientific discoveries in the field of movement disorders published in the past year, and important areas of scientific focus for 2021 research
- 2. Critically review high-impact clinical studies in the field of movement disorders published in the past year, and important ongoing trials with anticipated completion in 2020

MDS-PAS Regional Assembly

22:30 - 23:00 GMT All participants from Pan America are encouraged to attend.



NON-CME EDUCATIONAL ACTIVITIES

SCIENCE OF INDUSTRY SESSION (NON-CME):

These interactive sessions will provide participants with a non-CME educational opportunity to learn about novel therapeutic agents under development by industry. Sessions may incorporate basic scientists or clinicians working in industry, and topics may address the biological rationale or development process for specific therapeutics in development within the field of Movement Disorders.

MONDAY, SEPTEMBER 14, 2020

TUESDAY, SEPTEMBER 15, 2020

901	Science of Industry (non-CME)	902	Science of Industry (non-CME)	
	Antisense Oligonucleotides for Treating Movement Disorders		Immunotherapy for Proteinopathies 14:30 - 16:30 GMT	
Chairs:	14:30 - 16:30 GMT Stanley Fahn, USA	Chairs:	Wassilios Meissner, <i>France</i> Tiago Outeiro, <i>Germany</i>	
	Buz Jinnah, USA Biological Basis		Biological Basis Andrew Siderowf, USA	
	Stefan Pulst, USA		Update on Preclinical Studies	
	Preclinical Treatment Pipeline To Be Announced Current Status of Clinical Development		Warren Hirst, USA	
			Current Status of Clinical Development Wagner Zago, <i>USA</i>	
	Lauren Boak, <i>Switzerland</i>	CSPC Liaisons:	Wassilios Meissner, France	
CSPC Liaison:	Wassilios Meissner, France		Tiago Outeiro, Germany	
Tiago Outeiro, <i>Germany</i> Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Students/Residents/ Trainees At the conclusion of this session, participants should be better able to: 1. Discuss the biological basis for using antisense oligonucleotides as treatment for movement disorders		 Recommended Audience: Basic Scientists, Clinical Academicians, Practitioners, Students/Residents/ Trainees At the conclusion of this session, participants should be better able to: Discuss the biological basis for immunotherapy in neurological disease Summarize the results of preclinical studies based on immunotherapy strategies for treating movement disorders 		

- Summarize the results of preclinical studies using antisense oligonucleotides for treating movement disorders
- 3. Discuss the current status of clinical trials using antisense oligonucleotides for treating movement disorders
- 3. Summarize the current status of clinical trials based on immunotherapy strategies for treating movement disorders

SPONSORED SYMPOSIA

Join daily at 16:30 GMT for our Sponsored Symposia. These industry-based informational sessions provide attendees with non-CME educational opportunities to learn the latest in therapeutics.

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MONDAY, SEPTEMBER 14

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SUNDAY, SEPTEMBER 13

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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:+ 1414-276-2145; Fax:+ 1 414-276-3349; E-mail: membership@movementdisorders.org



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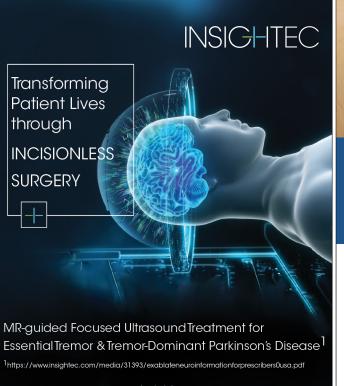
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