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Dear Colleagues,

We are excited to share the program of the MDS Virtual Congress 2021 with you. The MDS Leadership, along with the International Congress Oversight Committee, made the decision to host the 2021 International Congress in a primarily virtual format on September 17-22, 2021. We are confident that this decision will help the Society continue to reach all corners of the world and meet the needs of the changing global climate.

MDS has been working on ways to make the Virtual Congress even more successful for 2021 including: high quality movement disorders education, opportunities for post-session discussion, networking opportunities for participants, electronic posters with opportunities to engage with presenters, and an innovative technology platform.

We look forward to virtually welcoming you to the MDS Virtual Congress 2021 in September for no fee (complimentary).

Sincerely,

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

Oscar Gershanik
Chair, International Congress Oversight Committee, 2019-2021

Vincenzo Bonifati
Chair, Congress Scientific Program Committee, 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 Tan
Singapore

Treasurer-Elect
Irene Litvan
USA

Past-President
Christopher Goetz
USA

MDS INTERNATIONAL EXECUTIVE COMMITTEE

Shengdi Chen, People’s Republic of China
Mark Edwards, United Kingdom
Cristian Falup-Pecurariu, Romania
Joaquim Ferreira, Portugal
Marina de Koning-Tijssen, Netherlands
Alice Nieuwboer, Belgium
D. James Surmeier, USA
Pille Taba, Estonia
Mayela Rodriguez-Violante, Mexico
Ruey-Meei Wu, Taiwan
ABOUT MDS

INTERNATIONAL CONGRESS OVERSIGHT COMMITTEE
Chair: Oscar Gershanik, Argentina
Vincenzo Bonifati, Netherlands
Francisco Cardoso, Brazil
Christopher Goetz, USA
Tove Henriksen, Denmark
Matthew Stern, USA
Louis Tan, Singapore
Claudia Trenkwalder, Germany

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

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 10, 2021, Virtual Congress participants can view e-posters in the Poster Hall. Additionally, all abstracts will be published in the Movement Disorders journal e-supplement.

EXHIBITION
Manufacturers, distributors and suppliers of products and services for physicians and researchers involved with Movement Disorders are invited to participate in the Virtual Congress exhibition. To receive a copy of the Exhibitor Prospectus, please visit the International Congress section of the MDS website at https://www.mdscongress.org/Congress/Sponsorship--Exhibiting.htm. The exhibition is open to all registered delegates.

OFFICIAL LANGUAGE
The official language of the MDS Virtual Congress 2021 is English.

REGISTRATION
Registration will open June 7, 2021 for no fee (complimentary) for participants. The MDS Virtual Congress 2021 scientific sessions, sponsored symposia, exhibits and the Poster Hall will be available on demand for free until October 1, 2021. After October 1, 2021, the Virtual Congress will continue to be available on demand for MDS Members for a limited time.

PHOTOGRAPHY AND VIDEO RECORDING POLICY
Photography, video or audio recording (including screen capture) of these sessions, materials, speaker likenesses or MDS graphics without written permission from MDS is strictly prohibited. Please note that photographs and video taken by or on behalf of MDS shall be property of MDS.

Visit the Young Delegate’s Hub
on the Virtual Congress Platform after September 10, 2021 to find resources for career development, network with peers and MDS leadership and to learn about how to get more involved with the Society.

Highlights include:
• On Demand discussions with leaders in the field
• Discussion board to connect with peers
• Ask Me Anything: 30 minute sessions with leaders
• MDS volunteer opportunities
• Upcoming courses of interest to Young Delegates
• MDS membership information
• Photo wall
VIRTUAL CONGRESS 2021 EVENTS

WELCOME CEREMONY
Friday, September 17, 2021
10:00 EDT / 16:00 CEST / 18:00 GST / 23:00 JST

All Virtual Congress delegates are warmly invited to attend the Welcome Ceremony. MDS President Claudia Trenkwalder and other MDS leaders will introduce this event and give a preview of what to expect throughout the meeting.

In celebration of achievements of leaders in the field of Movement Disorders, awards will also be presented during the Welcome Ceremony.

MDS BUSINESS MEETING
Saturday, September 18, 2021
8:00 EDT / 14:00 CEST / 16:00 GST / 21:00 JST

Open to all International Congress delegates, the Society encourages Members to attend the MDS Business Meeting to receive updates from the MDS President and other MDS Officers on the Society and the various Regional Sections, to participate in the Officers’ and International Executive Committee (IEC) election and to discuss other Society activities.

CLOSING REMARKS
Wednesday, September 22, 2021
10:30 EDT / 16:30 CEST / 18:30 GST / 23:30 JST

MDS VIDEO CHALLENGE
Sunday, September 19, 2021
13:00 EDT / 19:00 CEST / 21:00 GST / 2:00 JST (+1)

Please join Masters of Ceremony, Anthony Lang and Kailash Bhatia, as they host a world-renowned panel of Movement Disorders experts in guiding participants through unique Movement Disorder cases. The cases will be presented by representatives of Movement Disorder Centers from around the world. The phenomenology, differential diagnosis and preferential diagnosis will be discussed by an assigned Expert Discussant after which the diagnosis will be revealed. Following this, the highlights and critical learning points/take-home messages will be discussed by one of four Faculty Discussants: Jennifer Friedman, Christine Klein, Manju Kurian and Marina De Koning-Tijssen. Awards will be given for the most interesting and challenging cases. The goal of this session is for attendees to learn from a series of unusual, very interesting patients and see how senior experts approach these types of challenging cases.

Meet the Experts of the MDS Video Challenge

Faculty Discussants:

- Jennifer Friedman, USA
- Christine Klein, Germany
- Manju Kurian, United Kingdom
- Marina De Koning-Tijssen, Netherlands

Expert Discussants:
- Zakiyah Aldaajani, Saudi Arabia
- Miryam Carecchio, Italy
- Silke Appel-Cresswell, Canada
- John Duda, USA
- Asha Kishore, India
- Anna Latorre, United Kingdom
- Davide Martino, Canada
- Pablo Mir, Spain
- Alex Münchau, Germany
- Ron Postuma, Canada
CME INFORMATION

TARGET AUDIENCE
This activity is intended for clinicians, researchers, fellows, residents, medical students, and allied health professionals with an interest in current clinical trends and approaches for the 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

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
The International Parkinson and Movement Disorder Society designates this education activity for a maximum of 34 AMA PRA Category 1 Credits™. Physicians should claim only credit commensurate with the extent of their participation in the activity.

SATISFACTORY COMPLETION
Participants must complete an evaluation for each session they attend to receive continuing medical education credit. Your chosen session(s) must be attended in their entirety. Partial credit of individual sessions is not available.

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 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.

Network with your colleagues to get the most out of your MDS Virtual Congress 2021 experience.

New this year:
- Meet the Expert Roundtable Discussions
- Post Session Discussions
- Networking Lounge
- Chat Channels

Log in to the Virtual Platform after September 10, 2021 to learn more.
SESSION DEFINITIONS

ACCREDITED SCIENTIFIC SESSIONS

2021 Themed Sessions: At each annual MDS Congress, the Congress Scientific Program Committee selects a theme that is highlighted throughout the meeting. This year’s theme, Towards Personalized Medicine for 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 🌐.

Controversies in Movement Disorders: This Plenary Session is designed 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 2021: Looking Towards 2022” 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.

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.

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. All 2021 Parallel Sessions will also feature Top Abstracts.

The Top Abstracts program gives broader visibility to the best original research presented during the MDS Virtual Congress by integrating select high-scoring abstract presentations into the parallel session presentations. Selected Top Abstract authors will present their findings during the session, and participate in the LIVE discussion amongst the session faculty.

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 on the clinical and basic science of select 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 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-ACCREDITED EDUCATIONAL ACTIVITIES AND NETWORKING OPPORTUNITIES

Abstract Presentations: All accepted abstract authors are welcome and encouraged to present their work during the Virtual Congress as a PDF poster and a short oral (video) presentation. Attendees can view abstracts on demand at any time during the Virtual Congress. All accepted abstracts are published by MDS.

Guided Poster Tours: Guided Poster Tours give delegates an opportunity to hear discussion on a select group of high-scoring abstracts dealing with defined topics.

NEW in 2021: Meet the Experts Roundtable Discussions: In an interactive roundtable format, participants of the Meet the Experts Roundtable Discussions will gain practical knowledge from Experts in the field on how to be successful in their careers. Each discussion is limited to a 25-person capacity with advanced sign-up required. More information about the Roundtable Discussions will be available in August.

NEW in 2021: Post-Session Discussions/Networking: Post-Session Discussions offer an opportunity for continued conversation to discuss the learnings and highlights of the session. The discussion will be moderated by Young Members, and will encourage open dialogue and networking amongst all attendees. Session faculty are encouraged to attend, but not required.

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.

MDS VIDEO CHALLENGE

MDS 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.

INTERNATIONAL CONGRESS FACULTY ROLES

Chair: Facilitates the learnings of the session, engages the faculty in ongoing discussion with attendees.

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, participates in the dialogue of the session.
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<td>Welcome Ceremony</td>
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<td>Plenary Session 201: Presidential Lectures Eastern Hemisphere</td>
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<td>Post-Session Discussion / Break</td>
<td>Therapeutic Plenary Session 101 Eastern Hemisphere</td>
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<td>Therapeutic Plenary Session 102 Eastern Hemisphere</td>
<td>Post-Session Discussion / Break</td>
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<td>Post-Session Discussion / Break</td>
<td>Skills Workshops, Special Topics in Movement Disorders Sessions &amp; Video Sessions</td>
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<td>Post-Session Discussion / Break</td>
<td>MDS Video Challenge</td>
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COLOR KEY
- CME Accredited Sessions
- Non-CME Educational Activities
- MDS Activities and Events
- Breaks

Please note that Therapeutic Plenary Sessions and Plenary Sessions will be launched twice during the Virtual Congress to accommodate participants in both the Western and Eastern Hemispheres. Participants can view the Schedule-at-a-Glance provided in several different time zones on the Virtual Congress website.

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# SCHEDULE-AT-A-GLANCE - Central European Summer Time (CEST), Copenhagen

Participants can view the Schedule-at-a-Glance provided in several different time zones on the Virtual Congress website.

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<thead>
<tr>
<th>CEST</th>
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| 2:30       | Plenary Session 202  
Eastern Hemisphere | Plenary Session 203  
Eastern Hemisphere | Plenary Session 205  
Eastern Hemisphere | Plenary Session 207  
Eastern Hemisphere |
| 3:00       |         |         |           |           |
| 3:30       |         |         |           |           |
| 4:00       | Post-Session Discussion / Break | Post-Session Discussion / Break | Post-Session Discussion / Break | Post-Session Discussion / Break |
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| 12:00      |         |         |           |           |
| 12:30      | Plenary Session 203  
Western Hemisphere | Plenary Session 205  
Western Hemisphere | Plenary Session 207  
Western Hemisphere |         |
| 13:00      |         |         |           |           |
| 13:30      |         |         |           |           |
| 14:00      | Post-Session Discussion / Break | Post-Session Discussion / Break | Post-Session Discussion / Break |         |
| 14:30      |         |         |           |           |
| 15:00      | Plenary Session 204: Neuroscience Bridges  
Eastern Hemisphere | Plenary Session 206  
Eastern Hemisphere | Plenary Session 208  
Eastern Hemisphere |         |
| 15:30      |         |         |           |           |
| 16:00      | Post-Session Discussion / Break | Post-Session Discussion / Break |         | Congress Closing Remarks |
| 16:30      |         |         |           |           |
| 17:00      |         |         |           |           |
| 17:30      | Parallel Sessions & Teaching Courses | Parallel Sessions & Teaching Courses | Parallel Sessions & Teaching Courses |         |
| 18:00      | Science of Industry (non-CME) Session | Science of Industry (non-CME) Session |         |         |
| 18:30      |         |         |           |           |
| 19:00      | Post-Session Discussion / Break | Post-Session Discussion / Break |         |         |
| 19:30      |         |         |           |           |
| 20:00      | Skills Workshops, Special Topics in Movement Disorders Sessions & Video Sessions | Skills Workshops, Special Topics in Movement Disorders Sessions & Video Sessions |         |         |
| 20:30      |         |         |           |           |
| 21:00      |         |         |           |           |
| 21:30      |         |         |           |           |
| 22:00      |         |         |           |           |

**COLOR KEY**
- **CME Accredited Sessions**
- **Non-CME Educational Activities**
- **MDS Activities and Events**
- **Breaks**
All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically. To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html.

Welcome Ceremony

16:00 CEST – 17:00 CEST

All Virtual Congress delegates are warmly invited to attend the Welcome Ceremony. MDS President Claudia Trenkwalder and other MDS leaders will introduce this event and give a preview of what to expect throughout the meeting.

In celebration of achievements of leaders in the field of Movement Disorders, awards will also be presented during the Welcome Ceremony.

FRIDAY, SEPTEMBER 17, 2021

201 Plenary Session

Presidential Lectures

2:00 CEST – 3:30 CEST

This session will not feature LIVE question and answer.

Chairs: Francisco Cardoso, Brazil
Claudia Trenkwalder, Germany
C. David Marsden Lecture Award
Etienne Hirsch, France
Stanley Fahn Lecture Award
Oscar Gershanik, Argentina
Junior Award Lecturers
To Be Announced

CSPC Liaisons: Francisco Cardoso, Brazil
Claudia Trenkwalder, Germany

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

SATURDAY, SEPTEMBER 18, 2021

101 Therapeutic Plenary Session

Parkinson’s Disease: Early Motor Aspects, Late Motor Aspects, Non-Motor Aspects

12:00 CEST – 14:00 CEST

At the conclusion of this session, participants should be better able to:
1. Summarize the current management strategies for Parkinson’s disease in the early clinical stages
2. Discuss the available management strategies for advanced and complicated Parkinson’s disease
3. Describe the range of non-motor symptoms of Parkinson’s disease and their management
### MDS Business Meeting

**104 Therapeutic Plenary Session**

**Surgical Interventions for Movement Disorders**

*20:00 CEST – 22:00 CEST*

**Chairs:**
- Beomseok Jeon, South Korea
- Marie Vidalhiet, France

**Deep Brain Stimulation in Parkinson’s Disease: Outcomes and Challenges**
- Elena Moro, France

**Deep Brain Stimulation in Dystonia**
- Andrea Kühn, Germany

**New Imaging Approaches in Deep Brain Stimulation**
- Michael Fox, USA

**CSPC Liaisons:**
- Beomseok Jeon, South Korea
- Andrea Kühn, Germany

**Recommended Audience:** Clinician / General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Discuss the outcomes of current challenges of DBS in the management of Parkinson’s disease
2. Discuss the role of DBS in the management of dystonia
3. Discuss new imaging-based approaches for optimized DBS

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### 102 Therapeutic Plenary Session

**Diagnosis and Treatment of Atypical Parkinsonism**

*15:00 CEST – 17:00 CEST*

**Chairs:**
- Piu Chan, People’s Republic of China
- Irene Litvan, USA

**Clinical Manifestations and Red-Flag Signs of Atypical Parkinsonism**
- Han-Joon Kim, South Korea

**Imaging and Other Biomarkers in Atypical Parkinsonism**
- Huw Morris, United Kingdom

**Management Strategies for Atypical Parkinsonism**
- Maria Stamolou, Greece

**CSPC Liaisons:**
- Shen-Yang Lim, Malaysia
- Wassilios Meissner, France

**Recommended Audience:** Clinician / General Neurology, Fellow / Resident / Student, Health Professional (non-physician)

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Differentiate atypical parkinsonism based on clinical features
2. Discuss imaging and other biomarkers in atypical parkinsonism
3. Describe management options for atypical parkinsonism

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### 103 Therapeutic Plenary Session

**Tremor, Dystonia and Ataxia**

*17:30 CEST – 19:30 CEST*

**Chairs:**
- Christopher Goetz, USA
- Ryuji Kaji, Japan

**Diagnosis and Management of Tremor**
- Peter Bain, United Kingdom

**Diagnosis and Management of Dystonia**
- Joseph Jankovic, USA

**Diagnosis and Management of Ataxia**
- Theresa Zesiewicz, USA

**CSPC Liaisons:**
- Buz Jinnah, USA
- Maria Stamolou, Greece

**Recommended Audience:** Clinician / General Neurology, Fellow / Resident / Student, Health Professional (non-physician), Industry, Researcher / Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe the diagnosis and management of tremor
2. Describe the diagnosis and management of dystonia
3. Describe the diagnosis and management of ataxia
All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically.

To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

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<td>Shen-Yang Lim, Malaysia Matthew Stern, USA Early Motor Aspects Jee-Young Lee, South Korea Late Motor Aspects Tove Henriksen, Denmark Non-Motor Aspects Maria Cersosimo, Argentina Oscar Gershanik, Argentina Shen-Yang Lim, Malaysia</td>
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<td>102</td>
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<td>Piu Chan, People’s Republic of China Irene Litvan, USA Clinical Manifestations and Red-Flag Signs of Atypical Parkinsonism Han-Joon Kim, South Korea Imaging and Other Biomarkers in Atypical Parkinsonism Huw Morris, United Kingdom</td>
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<td>103</td>
<td>Tremor, Dystonia and Ataxia</td>
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<td>Christopher Goetz, USA Ryuji Kaji, Japan Diagnosis and Management of Tremor Peter Bain, United Kingdom Diagnosis and Management of Dystonia Joseph Jankovic, USA Diagnosis and Management of Ataxia Theresa Zesiewicz, USA</td>
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<td>Surgical Interventions for Movement Disorders</td>
<td>9:30 CEST – 11:30 CEST</td>
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<td>Beomseok Jeon, South Korea Marie Vidailhet, France Deep Brain Stimulation in Parkinson’s Disease: Outcomes and Challenges Elena Moro, France Deep Brain Stimulation in Dystonia Andrea Kühn, Germany New Imaging Approaches in Deep Brain Stimulation Michael Fox, USA</td>
<td></td>
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</table>

Recommended Audience: Clinician/General Neurology, Fellow/Residents/Student, Health Professional (non-physician), Industry

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Summarize the current management strategies for Parkinson’s disease in the early clinical stages
2. Discuss the available management strategies for advanced and complicated Parkinson’s disease
3. Describe the range of non-motor symptoms of Parkinson’s disease and their management

Recommended Audience: Clinician/General Neurology, Fellow/Residents/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Differentiate atypical parkinsonism based on clinical features
2. Discuss imaging and other biomarkers in atypical parkinsonism
3. Describe management options for atypical parkinsonism

Recommended Audience: Clinician/General Neurology, Fellow/Residents/Student, Health Professional (non-physician), Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Discuss outcomes and current challenges of DBS in the management of Parkinson’s disease
2. Discuss the role of DBS in the management of dystonia
3. Discuss new imaging-based approaches for optimized DBS
3. Recognize clinical clues and plan diagnostic workup and management in patients with a suspected autoimmune movement disorder

2. Recognize clinical clues and plan diagnostic workup and management in adults with a suspected rare, treatable metabolic/genetic movement disorder

1. Recognize clinical clues and plan diagnostic workup and management in children with a suspected rare, treatable metabolic/genetic movement disorder

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

- Describe the pathophysiology of functional movement disorders studies
- Recognize clinical clues and plan diagnostic workup and management in children with a suspected rare, treatable metabolic/genetic movement disorder
- Recognize clinical clues and plan diagnostic workup and management in adults with a suspected rare, treatable metabolic/genetic movement disorder
- Recognize clinical clues and plan diagnostic workup and management in patients with a suspected autoimmune movement disorder

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced

To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

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To accommodate participants in both the Western and Eastern Hemispheres, this session will launch twice during the Virtual Congress.

### 304 Parallel Session

**Genetics of Parkinson’s Disease: State-of-the-Art and Future Perspectives**

14:30 CEST – 16:30 CEST

**Chairs:**
- Marcelo Kaufman, Argentina
- Carolyn Sue, Australia

**Update on the Monogenic Forms of Parkinson’s Disease**
- Andreas Puschmann, Sweden

**Update on the Genome-Wide Association Studies (GWAS) in Parkinson’s Disease**
- Sara Bandres Ciga, USA

**Ongoing and Future Global Collaborative Genetic Studies of Parkinson’s Disease**
- Ignacio Fernandez Mata, USA

**CSPC Liaisons:**
- Vincenzo Bonifati, Netherlands
- Tiago Outeiro, Germany

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science

**Education Level:** Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe the current landscape of highly-penetrant forms of inherited Parkinson’s disease
2. Summarize the status of the genome-wide association studies (GWAS) in Parkinson’s disease
3. Identify the ongoing and future global collaborative efforts in the field of the genetics of Parkinson’s disease

### 305 Parallel Session

**Huntington’s Disease: From Bench to Bedside**

14:30 CEST – 16:30 CEST

**Chairs:**
- Joaquim Ferreira, Portugal
- Karen Marder, USA

**What’s New in the Genetics of Huntington’s Disease**
- Laura Jardim, Brazil

**The Clinical Continuum from Pre-Manifest to Manifest Huntington’s Disease**
- Julie Stout, Australia

**Present and Future of a Multidisciplinary Approach to Huntington’s Disease Management**
- Anne Rosser, United Kingdom

**CSPC Liaisons:**
- Francisco Cardoso, Brazil
- Karen Marder, USA

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Describe the recent developments in the genetics of Huntington’s disease
2. Describe the clinical features of pre-manifest and manifest Huntington’s disease
3. Review the multidisciplinary approach to the pharmacological and non-pharmacological management of Huntington’s disease

### 306 Parallel Session

**Update on MRI Imaging in Movement Disorders**

14:30 CEST – 16:30 CEST

**Chairs:**
- Per Borghammer, Denmark
- Jong-Min Kim, South Korea

**Why Do We Need a Standardized MRI Protocol for Movement Disorders?**
- David Vaillancourt, USA

**Multi-modal MRI in Parkinson’s Disease: More Information, More Knowledge?**
- Sofia Reimao, Portugal

**The Role of MRI in Atypical Parkinsonism: Diagnosis, Prognosis, Progression Markers**
- Stéphane Lehericy, France

**CSPC Liaisons:**
- Roongroj Bhidayasiri, Thailand
- Per Borghammer, Denmark

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Explain the need for standardized MRI protocols, which are robust across different imaging centers and MRI platforms
2. Explain how multi-modal imaging protocols amplify the diagnostic potential of MRI in Parkinson’s disease
3. Explain how multi-modal MRI can be used for diagnosis, prognostication and as progression markers in atypical parkinsonism
3. Perform a comprehensive examination of children with movement disorders
2. Perform a comprehensive examination of patients with hyperkinetic movement disorders
1. Perform a comprehensive examination of patients with parkinsonism symptoms

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

Education Level: Beginner/Foundational, Intermediate/Experienced
Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional
CSPC Liaisons: Ron Postuma, Canada, Carolyn Sue, Australia

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3. Propose a diagnostic and management approach to different types of myoclonus
2. Recognize stereotypies, their associations and how to differentiate them from other movement disorders
1. Summarize the diagnostic approach to patients with ataxia

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

Education Level: Beginner/Foundational, Intermediate/Experienced
Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student
CSPC Liaisons: Cynthia Comella, USA, Oscar Gershankin, Argentina, Eduardo Tolosa, Spain, Sanjay Pandey, India, Jennifer Friedman, USA

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2. Recognize the importance of searching for good mentors when pursuing a career and specialize in movement disorders
1. Define an area of expertise in movement disorders and pursue a career therein

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

Education Level: Beginner/Foundational
Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student
CSPC Liaisons: Alberto Espay, USA, Raymond Rosales, Philippines, Kathleen Shannon, USA

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2. Discuss the steps necessary to implement a telemedicine clinic for patients with movement disorders
1. Recognize symptoms, perform a diagnostic workup, and organize management plans for patients with gastrointestinal and genitourinary autonomic dysfunctions

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

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert
Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student
CSPC Liaisons: Roongroj Bhidayasiri, Thailand, Alberto Espay, USA, Pietro Cortelli, Italy, Veronica Santini, USA, Asha Kishore, India, Jawad Bajwa, Saudi Arabia, Meredith Spindler, USA, Pietro Guaraldi, Italy

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This session will feature Top Abstract presentations;
To accommodate participants in both the Western and Eastern Hemispheres, this session will launch twice during the Virtual Congress

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All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically.

To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

### 602 Special Topics in Movement Disorders

#### Exercise in Parkinson’s Disease: Does One Size Fit All?
17:00 CEST – 18:30 CEST

- Daniel Corcos, USA
- Alice Neychev, Belgium

CSPC Liaisons: Terry Ellis, USA
Jennifer Goldman, USA

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Assess the evidence for and against a personalized versus generalized approach to exercise prescription in Parkinson’s disease
2. Analyze current evidence to determine optimal dosing of exercise to improve outcomes in Parkinson’s disease

### 603 Special Topics in Movement Disorders

#### The Challenges of Parkinson’s Disease in Low and Middle-Income Countries
17:00 CEST – 18:30 CEST

- Gabriel Arango, Colombia
- Augustina Charway-Felli, Ghana

CSPC Liaisons: Njideka Okubadejo, Nigeria
Claudia Trenkwalder, Germany

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe the challenges of diagnosing and managing Parkinson’s disease in low and middle-income countries
2. Delineate strategies that can improve access to trained healthcare professionals and services for people with Parkinson’s disease in low and middle-income countries

### 604 Special Topics in Movement Disorders

#### Emerging Gene and Cell-Based Therapeutic Approaches for Movement Disorders
17:00 CEST – 18:30 CEST

- Aristide Merola, USA
- Jun Takahashi, Japan

CSPC Liaisons: Vincenzo Bonifati, Netherlands
Carolyn Sue, Australia

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Discuss completed and ongoing clinical trials employing nucleic acids as therapeutic agents for different movement disorders
2. Discuss the different current and future cell-based therapeutic approaches to neurodegenerative movement disorders

### 701 Video Session

#### Neuro-Ophthalmology & Movement Disorders
17:00 CEST – 18:30 CEST

- Ji-Soo Kim, South Korea
- Janet Rucker, USA

CSPC Liaisons: Orlando Barsottini, Brazil
Shen-Yang Lim, Malaysia

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Researchers/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Perform a bedside neuro-ophthalmological examination relevant to movement disorders
2. Describe clinical ocular and eye movement abnormalities that aid diagnosis of common, as well as uncommon, movement disorders
All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically. To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

702 Video Session

Pediatric Movement Disorders
17:00 CEST – 18:30 CEST
Belen Perez Duenas, Spain
Marcelo Masruha, Brazil
CSPC Liaisons: Orlando Barsottini, Brazil
Jennifer Friedman, USA

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician)

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe the phenotypic spectrum of movement disorders in children
2. Recognize potentially treatable pediatric movement disorders

MDS Video Challenge
19:00 CEST – 22:00 CEST

Please join Masters of Ceremony, Anthony Lang and Kailash Bhatia, as they host a world-renowned panel of Movement Disorders experts in guiding participants through unique Movement Disorder cases. The cases will be presented by representatives of Movement Disorder Centers from around the world. The phenomenology, differential diagnosis and preferential diagnosis will be discussed by an assigned Discussant after which the diagnosis will be revealed. Following this, the highlights and critical learning points/take-home messages will be discussed by one of 4 Experts: Jennifer Friedman, Christine Klein, Manju Kurian and Marina De Koning-Tijssen. Awards will be given for the most interesting and challenging cases. The goal of this session is for attendees to learn from a series of unusual, very interesting patients and see how senior experts approach these types of challenging cases.
### 202 Plenary Session

**The Heterogeneity of Parkinson’s Disease**

2:00 CEST – 4:00 CEST

Chairs: Ron Postuma, Canada  
Louis Tan, Singapore

Evolution of Parkinson’s Disease Subtypes from Pre-Motor to Late Disease Stages  
Michele Hu, United Kingdom

Defining Parkinson’s Disease Subtypes According to Their Biomarker Signature  
Chin-Hsien Lin, Taiwan

Precision Medicine for Parkinson’s Disease Subtypes  
Connie Marras, Canada

CSPC Liaisons: Per Borghammer, Denmark  
Wassilios Meissner, France

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe the evolution of Parkinson’s disease subtypes from pre-motor to late disease stages
2. Recognize Parkinson’s disease subtypes according to their biomarker signature
3. Discuss precision medicine for Parkinson’s disease subtypes

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### 203 Plenary Session

**Neuro-Infections and Movement Disorders**

12:00 CEST – 14:00 CEST

Chairs: Angelo Antonini, Italy  
Roongroj Bhidayasiri, Thailand

Neurobiology of SARS-CoV-2  
Stanley Perlman, USA

Movement Disorders in Patients with COVID-19 Infection Cases  
Hadi Manji, United Kingdom

Movement Disorders in Chronic Neuroinfections: Phenomenology and Treatment  
Pramod Pal, India

CSPC Liaisons: Francisco Cardoso, Brazil  
Claudia Trenkwalder, Germany

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Summarize the biology of the SARS-CoV-2 and the pathogenesis of COVID-19 with a focus on the neurological aspects
2. Recognize the neurological phenomenology with a focus on movement disorders in patients with COVID-19
3. Discuss the diagnosis and management of chronic neuroinfections associated with movement disorders

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### 204 Plenary Session

**Neuroscience Bridges**

14:30 CEST – 16:00 CEST

Chairs: Vincenzo Bonifati, Netherlands  
Etienne Hirsch, France

Don Cleveland, USA  
Madeline Lancaster, United Kingdom

CSPC Liaisons: Vincenzo Bonifati, Netherlands  
Etienne Hirsch, France

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert
All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically. To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

307 Parallel Session 🔹 🔹
Glucocerebrosidase (GBA) Variants and Parkinson's Disease: From Bench to Bedside
17:00 CEST – 19:00 CEST

Chairs:
Ellen Sidransky, USA
Enza Maria Valente, Italy

Molecular Pathogenetic Mechanisms Underlying GBA-associated Parkinson's Disease
Yoshitaka Nagai, Japan

Clinical Features in GBA-associated Parkinson's Disease
Enza Maria Valente, Italy

Precision Medicine in GBA-associated Parkinson's Disease
Alice Chen-Plotkin, USA

CSPC Liaisons:
Andrew Siderowf, USA
Ryosuke Takahashi, Japan

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science

Education Level: Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe the pathogenetic mechanisms in Parkinson's disease associated with GBA variants
2. Describe the clinical features in Parkinson's disease associated with GBA variants
3. Discuss precision medicine approaches towards the management of Parkinson's disease associated with GBA variants

308 Parallel Session 🌟🌟
Multidisciplinary Care of Movement Disorders via Telehealth
17:00 CEST – 19:00 CEST

Chairs:
Jennifer Goldman, USA
Alice Nieuwboer, Belgium

Models of Multidisciplinary Care via Telehealth:
Opportunities and Challenges
Bastiaan Bloem, Netherlands

Delivering Telehealth in Underserved Areas
Njideka Okubadejo, Nigeria

Bringing the Multidisciplinary Rehabilitation Team Together via Telehealth
Lori Quinn, USA

CSPC Liaisons:
Terry Ellis, USA
Jennifer Goldman, USA

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe multidisciplinary models of telehealth care, and discuss their opportunities and challenges
2. Discuss the delivery of telehealth in underserved areas
3. Describe the delivery of rehabilitation care through telehealth

309 Parallel Session 🌟🌟
REM Sleep Behavior Disorder (RBD) and Other Parasomnias in Parkinson's Disease and Other Synucleinopathies
17:00 CEST – 19:00 CEST

This session is offered in collaboration with the European Academy of Neurology (EAN).

Chairs:
Claudio Bassetti, Switzerland
Claudia Trenkwalder, Germany

Phenomenology
Alejandro Iranzo, Spain

Pathophysiology
Isabelle Arnulf, France

RBD: From Biomarkers to Treatments
Ron Postuma, Canada

CSPC Liaisons:
Pietro Cortelli, Italy
Tove Henriksen, Denmark

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician)

Education Level: Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Describe clinical manifestation of RBD and other parasomnias and their relationships with other clinical entities
2. Describe the pathophysiology and neuropathology underlying RBD and other parasomnias
3. Describe the current status of RBD as a biomarker of synucleinopathies and its management
MONDAY, SEPTEMBER 20, 2021

All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically.

To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

310 Parallel Session 🌟

New Approaches and Pitfalls in the Diagnosis and Management of Tourette Syndrome
17:00 CEST – 19:00 CEST

Chairs: Alexander München, Germany
       Tara Murphy, United Kingdom
Pathogenesis of Tourette Syndrome: An Update
James Leckman, USA
Clinical Features Assisting the Differential Diagnosis of Tourette Syndrome
Kirsten Mueller-Vahl, Germany
Medical and Surgical Management of Tourette Syndrome
Tamara Pringsheim, Canada

CSPC Liaisons: Francisco Cardoso, Brazil
               Alberto Espay, USA

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Describe the diagnostic clues and pathogenesis of Tourette Syndrome
2. Discuss the differential diagnosis of Tourette syndrome
3. Summarize the medical and surgical management of Tourette syndrome

312 Parallel Session 🌟

The Evolving Spectrum of Movement Disorder Tauopathies
17:00 CEST – 19:00 CEST

Chairs: Charles Adler, USA
        Wassilios Meissner, France
Pathogenesis of movement disorder tauopathies
The Phenotypic Spectrum
Melissa Armstrong, USA
Imaging and Other Biomarkers
Yaroslau Compta, Spain
Current Management, Recent and Ongoing Trials
Adam Boxer, USA

CSPC Liaisons: Wassilios Meissner, France
               Maria Stamelou, Greece

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science

Education Level: Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe the phenotypic spectrum of movement disorder tauopathies
2. Describe the current evidence on biomarkers for movement disorder tauopathies
3. Describe current and future management in movement disorder tauopathies

311 Parallel Session 🌟

Dystonia: From Bench to Bedside
17:00 CEST – 19:00 CEST

Chair: Patricia De Carvalho Aguiar, Brazil
       Buz Jinnah, USA
Potential Clinical Implications of Recent Genetic Studies in Dystonia
Michael Zech, Germany
Potential Clinical Implications of Recent Imaging Studies in Dystonia
Kristina Simonyan, USA
Potential Clinical Implications of Recent Pharmacological Studies in Dystonia
Antonio Picani, Italy

CSPC Liaisons: Buz Jinnah, USA
               Maria Stamelou, Greece

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Describe the clinical implications of recent genetic studies in dystonia
2. Describe the clinical implications of recent neuroimaging studies in dystonia
3. Summarize evidence for potential novel management approaches in dystonia

312 Parallel Session 🌟

The Evolving Spectrum of Movement Disorder Tauopathies
17:00 CEST – 19:00 CEST

Chairs: Charles Adler, USA
        Wassilios Meissner, France
Pathogenesis of movement disorder tauopathies
The Phenotypic Spectrum
Melissa Armstrong, USA
Imaging and Other Biomarkers
Yaroslau Compta, Spain
Current Management, Recent and Ongoing Trials
Adam Boxer, USA

CSPC Liaisons: Wassilios Meissner, France
               Maria Stamelou, Greece

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science

Education Level: Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe the phenotypic spectrum of movement disorder tauopathies
2. Describe the current evidence on biomarkers for movement disorder tauopathies
3. Describe current and future management in movement disorder tauopathies

403 Teaching Course 🌟

Genetic Testing and Counseling: What Clinicians Need to Know
17:00 CEST – 19:00 CEST

Chairs: Rachel Saunders-Pullman, USA
        Susanne Schneider, Germany
Genetic Testing: Techniques and Pitfalls
Andrea Nemeth, United Kingdom
Strategies in Choosing Genetic Tests for Patients with Movement Disorders
Kishore Kumar, Australia
Genetic Counseling in Movement Disorders: Patients and Unaffected Relatives
Deborah Raymon, USA

CSPC Liaisons: Ron Postuma, Canada
               Carolyn Sue, Australia

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Explain the basic concepts of genetic testing and recognize the pitfalls of different genetic testing platforms available
2. Recommend the most appropriate genetic testing platform for patients with movement disorders including considerations for regional differences in genetic testing accessibility
3. Discuss ethical issues and considerations in genetic counseling for patients with movement disorders and their families

Symbol Legend: 🌟 2021 Themed Session; 🌋 This session will feature Post-Session Discussion/Networking; ⭐ This session will feature Top Abstract presentations;
To accommodate participants in both the Western and Eastern Hemispheres, this session will launch twice during the Virtual Congress

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All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically. To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

404 Teaching Course
Gait Disorders: From Pathophysiology to the Clinic
17:00 CEST – 19:00 CEST
Chairs: Mark Hallett, USA
Lynn Rochester, United Kingdom
Pathophysiology: The Role of Different Central Nervous System (CNS) Structures
Anat Mirelman, Israel
Phenomenology
Alfonso Fasano, Canada
Common and Rare Neurological Diseases with Prominent Gait Dysfunction
Pattamon Panyakaew, Thailand
CSPC Liaisons: Ron Postuma, Canada
Carolyn Sue, Australia
Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Researcher/Basic Science
Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert
At the conclusion of this session, participants should be better able to:
1. Describe the role of different CNS structures in the pathophysiology of gait disorders
2. Recognize the phenomenology of the different gait disorders
3. Diagnose common and rare neurological diseases with prominent gait dysfunction

901 Science of Industry (non-CME)
See page 33 for complete session information.

504 Skills Workshop
How to Use the MDS-UPDRS and the MDS-NMS
19:30 CEST – 21:00 CEST
Gheorghe Filup-Pecurarul, Romania
Veronica Santini, USA
CSPC Liaisons: Nijdeka Okubadejo, Nigeria
Veronica Santini, USA
Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science
Education Level: Beginner/Foundational, Intermediate/Experienced
At the conclusion of this session, participants should be better able to:
1. Evaluate patients and participants with the MDS-Unified Parkinson’s Disease Rating Scale (MDS-UPDRS) and the MDS-Non-motor Rating Scale (MDS-NMS) in clinical and research settings
2. Practice using the MDS-Unified Parkinson’s Disease Rating Scale (MDS-UPDRS) and the MDS-Non-motor Rating Scale (MDS-NMS) through interactive exercises and test cases

503 Skills Workshop
Speech Disorders in Parkinsonism and Their Management
19:30 CEST – 21:00 CEST
Serge Pinto, France
Elisa Tripoliti, United Kingdom
CSPC Liaisons: Terry Ellis, USA
Veronica Santini, USA
Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science
Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert
At the conclusion of this session, participants should be better able to:
1. Distinguish the features and underlying neural correlates of dysarthria in patients with Parkinson’s disease and atypical Parkinsonism
2. Describe the role played by PET and SPECT methods in Parkinson’s disease research and in the clinical setting – with emphasis on diagnosis, prognostication, and progression markers
3. Describe the role played by PET and SPECT methods in atypical parkinsonism research and in the clinical setting – with emphasis on diagnosis, prognostication, and progression markers

504 Skills Workshop
Nuclear Medicine in the Management of Movement Disorders
19:30 CEST – 21:00 CEST
Nicola Pavese, United Kingdom
Jennifer Whitwell, USA
CSPC Liaisons: Per Borghammer, Denmark
Karen Marder, USA
Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science
Education Level: Beginner/Foundational, Intermediate/Experienced
At the conclusion of this session, participants should be better able to:
1. Describe the role played by PET and SPECT methods in Parkinson’s disease research and in the clinical setting – with emphasis on diagnosis, prognostication, and progression markers
2. Describe the role played by PET and SPECT methods in atypical parkinsonism research and in the clinical setting – with emphasis on diagnosis, prognostication, and progression markers
MONDAY, SEPTEMBER 20, 2021

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606 Special Topics in Movement Disorders

**Hereditary Spastic Paraplegia: Clinical Spectrum and Genetic Advances**
19:30 CEST – 21:00 CEST
John Fink, USA
Giovanni Stevanin, France

CSPC Liaisons: Jennifer Friedman, USA
Buz Jinnah, USA

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Discuss the clinical spectrum and approach to diagnosis of hereditary spastic paraplegias
2. Discuss emerging pathogenetic pathways and implications for the development of rational management strategies for hereditary spastic paraplegias

607 Special Topics in Movement Disorders

**Health Disparities in Movement Disorders**
19:30 CEST – 21:00 CEST
Roland Dominic Jamora, Philippines
Allison Willis, USA

CSPC Liaisons: Nijdeka Okubadejo, Nigeria
Veronica Santini, USA

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Examine existing racial, gender, and other health disparities in patients with movement disorders
2. Apply methods to combat health disparities and improve access and quality of movement disorders care

608 Special Topics in Movement Disorders

**Movement Disorders and Internal Medicine**
19:30 CEST – 21:00 CEST
Annu Aggarwal, India
José Luiz Pedroso, Brazil

CSPC Liaisons: Roongroj Bhidayasiri, Thailand
Buz Jinnah, USA

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician)

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Recognize the phenomenology of the most common movement disorders associated with general medical conditions
2. Describe the management of common movement disorders associated with general medical conditions

703 Video Session

**A Case Based Approach to Dystonia: What Would You Do?**
19:30 CEST – 21:00 CEST
Sun Ju Chung, South Korea
Francesca Morgante, United Kingdom

CSPC Liaisons: Beomseok Jeon, South Korea
Buz Jinnah, USA

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Recognize unusual presentations of various forms of dystonia
2. Discuss current options (oral medications, botulinum toxin, Deep Brain Stimulation, rehabilitation) in the management of individual patients with different forms of dystonia

704 Video Session

**Neuromodulation in Parkinson’s Disease: A Case-Based Approach**
19:30 CEST – 21:00 CEST
Patricia Krause, Germany
Stephen Tisch, Australia

CSPC Liaisons: Beomseok Jeon, South Korea
Andrea Kühn, Germany

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry

Education Level: Beginner/Foundational, Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Discuss inclusion and exclusion criteria for Deep Brain Stimulation in Parkinson’s disease
2. Discuss troubleshooting and parameter setting for optional Deep Brain Stimulation in Parkinson’s disease
All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically.

To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

203 Plenary Session

**Neuro-Infections and Movement Disorders**
2:00 CEST – 4:00 CEST

**Chairs:**
- Angelo Antonini, Italy
- Roongroj Bhidayasiri, Thailand
- Neurobiology of SARS-CoV-2
- Stanley Perlman, USA
- Movement Disorders in Patients with COVID-19
- Hadi Manji, United Kingdom
- Movement Disorders in Chronic Neuroinfections: Phenomenology and Treatment
- Pramod Pal, India

**CSPC Liaisons:**
- Francisco Cardoso, Brazil
- Claudia Tremkwalder, Germany

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Summarize the biology of the SARS-CoV-2 and the pathogenesis of COVID-19 with a focus on the neurological aspects
2. Recognize the neurological phenomenology with a focus on movement disorders in patients with COVID-19
3. Discuss the diagnosis and management of chronic neuroinfections associated with movement disorders

204 Plenary Session

**Neuroscience Bridges**
4:30 CEST – 6:00 CEST

**This session will not feature LIVE faculty question and answer.**

**Chairs:**
- Vincenzo Bonifati, Netherlands
- Etienne Hirsch, France
- Don Cleveland, USA
- Madeline Lancaster, United Kingdom

**CSPC Liaisons:**
- Vincenzo Bonifati, Netherlands
- Etienne Hirsch, France

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

205 Plenary Session

**Update on Alpha-Synuclein Protein: Biology and Pathophysiology**
12:00 CEST – 14:00 CEST

**Chairs:**
- Tiago Outeiro, Germany
- Eng-King Tan, Singapore
- Alpha-synuclein Structures
- Michel Goedert, United Kingdom
- Update on the Lewy Body
- Henning Stahlberg, Switzerland
- Mechanisms of Alpha-synuclein Related Neurodegeneration
- Veerle Baekelandt, Belgium

**CSPC Liaisons:**
- Per Borghammer, Denmark
- Tiago Outeiro, Germany

**Recommended Audience:** Fellow/Resident/Student, Industry, Researcher/Basic Science

**Education Level:** Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Describe the structures of alpha-synuclein and the relationships with clinical manifestations
2. Discuss the nature and composition of the alpha-synuclein inclusions in the human brain
3. Summarize current knowledge on the mechanisms of alpha-synuclein related neurodegeneration

206 Plenary Session

**Update on Recent Clinical Trials in Parkinson’s Disease**
14:30 CEST – 16:30 CEST

**Chairs:**
- Olivier Rascol, France
- Yih-Ru Wu, Taiwan
- Motor Features
- Susan Fox, Canada
- Neuropsychiatric and Other Non-Motor Features
- Simon Lewis, Australia
- Disease Modifications
- Thomas Foltynie, United Kingdom

**CSPC Liaisons:**
- Wassilios Meissner, France
- Andrew Siderowf, USA

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Discuss recent clinical trials for symptomatic control of motor features of Parkinson’s disease
2. Review recent clinical trials for neuropsychiatric and other non-motor features of Parkinson’s disease
3. Discuss recent clinical trials and future prospects for disease modification in Parkinson’s disease
### 313 Parallel Session 🌟

**Parkinson’s Disease: Neuroimaging Beyond Dopamine**

17:00 CEST – 19:00 CEST

**Chairs:**
- Marios Politis, United Kingdom
- A. Jon Stoessl, Canada

**Acetylcholine: From Cognitive Functions to Gait?**
- Hitoshi Shimada, Japan

**Serotonin: Motor and Non-Motor Aspects, From Dyskinetic to Mood Disorder**
- Heather Wilson, United Kingdom

**Noradrenaline: REM Sleep Behavior Disorder (RBD), Cognition and Other Non-motor Aspects**
- Michael Sommerauer, Denmark

**CSPC Liaisons:**
- Tove Henriksen, Denmark
- Maria Stamelou, Greece

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Describe the role of the cholinergic systems in the pathophysiology of cognitive and gait disturbances in Parkinson’s disease, and the translational implications
2. Describe the role of the serotoninergic systems in the pathophysiology of motor and non-motor aspects of Parkinson’s disease, and the translational implications
3. Describe the role of the noradrenergic systems in the pathophysiology of RBD, cognitive and other non-motor disturbances in Parkinson’s disease, and the translational implications

### 314 Parallel Session 🌟

**Modifiers of Penetrance in Hereditary Movement Disorders**

17:00 CEST – 19:00 CEST

**Chairs:**
- Caroline Tanner, USA
- Ruey-Mei Wu, Taiwan

**The Genetic Modifiers of Penetrance**
- Ziv Gan-Or, Canada

**The Non-genetic Modifiers of Penetrance**
- Alastair Noyce, United Kingdom

**Reduced Penetration: Mechanisms and Translational Insights**
- Christine Klein, Germany

**CSPC Liaisons:**
- Vincenzo Bonifati, Netherlands
- Claudia Trenkwalder, Germany

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science

**Education Level:** Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe the known genetic modifiers of penetrance of inherited movement disorders
2. Describe the known non-genetic modifiers of penetrance of inherited movement disorders
3. Discuss the mechanisms and potential translational implications of reduced penetrance

### 315 Parallel Session 🌟🌟

**Towards Precision Medicine in Multiple System Atrophy with Revised Diagnostic Criteria**

17:00 CEST – 19:00 CEST

**Chairs:**
- Tetsutaro Ozawa, Japan
- Gregor Wenning, Austria

**Diagnostic Algorithms**
- Horacio Kaufmann, USA

**Personalized Approach to Optimized Care**
- Alessandra Fanciulli, Austria

**Current Status of Disease Modifying Therapies**
- Wolfgang Singer, USA

**CSPC Liaisons:**
- Wassilios Meissner, France
- Veronica Santini, USA

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Apply a stepwise diagnostic algorithm to patients with suspected multiple system atrophy
2. Create a comprehensive, multidisciplinary, patient-centered care plans, including telemedicine infrastructures
3. Discuss the current status of approaches aimed at disease modification in multiple system atrophy
TUESDAY, SEPTEMBER 21, 2021

316 Parallel Session

**Palliative Medicine in Parkinson’s Disease**
17:00 CEST – 19:00 CEST

**Chairs:**
- Victor McConvey, Australia
- Pille Tabu, Estonia
- Janis Miyasaki, Canada

**What Are the Palliative Care Needs of People Living with Parkinson’s Disease?**
- Indu Subramanian, USA
- The Evidence for Palliative Care in Parkinson’s Disease
- Benzi Kluger, USA

**Integrative Palliative Care into the Routine Care of the People Living with Parkinson’s Disease**
- Kathryn Peall, UK

**CSPC Liaisons:**
- Shen-Yang Lim, Malaysia
- Claudia Trenkwalder, Germany

**Recommended Audience:**
- Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

**Education Level:**
- Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Recognize the palliative care needs of people living with Parkinson's disease
2. Describe the evidence base for palliative medicine in Parkinson's disease
3. Integrate palliative care approaches into Parkinson’s disease management

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317 Parallel Session

**Cognitive and Neuropsychiatric Aspects of Selected Movement Disorders**
17:00 CEST – 19:00 CEST

**Chairs:**
- Priya Jagota, Thailand
- Irena Rektorova, Czech Republic
- Jaime Kulisevsky, Spain

**Parkinson’s Disease – Lewy Body Dementia Continuum**
- Janis Miyasaki, Canada
- Dystonia
- Kathryn Peall, United Kingdom

**Cerebellar Disorders**
- Jeremy Schmahmann, USA

**CSPC Liaisons:**
- Steven Frucht, USA
- Karen Marder, USA

**Recommended Audience:**
- Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

**Education Level:**
- Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Identify cognitive and neuropsychiatric features associated with the Parkinson’s disease – Lewy body dementia continuum, and discuss management approaches
2. Describe cognitive and neuropsychiatric impairments associated with dystonia and discuss management approaches
3. Define cognitive and neuropsychiatric features associated with cerebellar disorders and discuss management approaches

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318 Parallel Session

**Paroxysmal and Episodic Movement Disorders**
17:00 CEST – 19:00 CEST

**Chairs:**
- Roberto Erro, Italy
- Aurelie Meneret, France
- Laura Silveira-Moriyama, Brazil

**Clinical Spectrum, Evaluation and Management**
- Jong Hee Chae, South Korea

**CSPC Liaisons:**
- Buz Jinnah, USA
- Maria Stamelou, Greece

**Recommended Audience:**
- Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science

**Education Level:**
- Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe the clinical spectrum, evaluation and management of intermittent movement disorders, including paroxysmal dyskinesias and episodic ataxias
2. Describe the genetic causes and pathophysiology of intermittent movement disorders, including paroxysmal dyskinesias and episodic ataxias
3. Describe the non-genetic causes and pathophysiology of intermittent movement disorders, including paroxysmal dyskinesias and episodic ataxias

405 Teaching Course

**Tremor: Differential Diagnosis and Management**
17:00 CEST – 19:00 CEST

**Chairs:**
- Günther Deuschl, Germany
- Claudia Testa, USA
- Ming-Kai Pan, Taiwan

**Clinical and Electrophysiological Approaches to Differential Diagnosis in Tremor**
- Tabish Saffee, United Kingdom

**Pathophysiology of Tremor: Perspectives for Clinical Practice**
- Jong Hee Chae, South Korea

**CSPC Liaisons:**
- Ron Postuma, Canada
- Carolyn Sue, Australia

**Recommended Audience:**
- Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

**Education Level:**
- Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Differentiate the diagnosis of tremor using clinical assessment and electrophysiological studies
2. Discuss the pathophysiology of tremor and the insights for the clinical practice
3. Summarize current and future management options for tremor
TUESDAY, SEPTEMBER 21, 2021

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### 406 Teaching Course

**Non-Motor Aspects of Parkinson’s Disease**
17:00 CEST – 19:00 CEST

**Chairs:**
Anette Schrag, United Kingdom  
Ali Shalash, Egypt

**Diagnosis and Management of Bowel and Bladder Dysfunction**
Ai Huey Tan, Malaysia

**Pain**
K. Ray Chaudhuri, United Kingdom

**The MDS Non-Motor Rating Scale (MDS-NMS)**
Carmen Rodriguez Blazquez, Spain

**CSPC Liaisons:**
Ron Postuma, Canada  
Carolyn Sue, Australia

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science  

**Education Level:** Beginner/Foundational, Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Describe and manage bowel and bladder dysfunction in Parkinson’s disease
2. Summarize the causes, types, and management of pain in Parkinson’s disease
3. Discuss the characteristics of the MDS Non-motor Rating Scale (MDS-NMS) and its role in the assessment of patients with Parkinson’s disease

### 506 Skills Workshop

**Device-aided Treatment for Advanced Parkinson’s Disease**
19:30 CEST – 21:00 CEST

**CSPC Liaisons:**
Tove Henriksen, Denmark  
Jennifer Goldman, USA

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician)

**Education Level:** Beginner/Foundational, Intermediate/Experienced

At the conclusion of this session, participants should be better able to:
1. Recognize the different types of device-aided treatments for advanced Parkinson’s disease
2. Discuss the indications and contraindications for each device-aided treatment option

### 902 Science of Industry (non-CME)

**Botulinum Toxin: A Case-Based Approach**
19:30 CEST – 21:00 CEST

**CSPC Liaisons:**
Roongroj Bhidayasiri, Thailand  
Beomseok Jeon, South Korea

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Describe optimal strategies for the application of botulinum toxins for hemifacial spasm, cranial dystonia, cervical dystonia, and limb dystonia
2. Describe the optimal strategies for the application of botulinum toxins for the treatment of spasticity affecting the upper and lower limb

### 609 Special Topics in Movement Disorders

**Lessons From My Patients**
19:30 CEST – 21:00 CEST

**CSPC Liaisons:**
Tove Henriksen, Denmark  
Njideka Okubadejo, Nigeria

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced

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

### 610 Special Topics in Movement Disorders

**Unraveling the Role of Autophagy in Parkinsonism: From Bench to Bedside**
19:30 CEST – 21:00 CEST

**CSPC Liaisons:**
Etienne Hirsch, France  
Ryosuke Takahashi, Japan

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Industry, Researcher/Basic Science

**Education Level:** Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Discuss the mechanisms of autophagy in synucleinopathies and tauopathies
2. Identify the therapeutic potential of modulating autophagy
## Special Topics in Movement Disorders

### 611 Non-Invasive Stimulation in Movement Disorders
- **19:30 CEST – 21:00 CEST**
- Rubens Gisbert Cury, Brazil
- Teresa Kimberley, USA

**CSPC Liaisons:** Steven Frucht, USA
Andrea Kühn, Germany

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced

**At the conclusion of this session, participants should be better able to:**
1. Summarize the current knowledge and the potential of non-invasive stimulation as a management modality in movement disorders
2. Describe the current evidence and clinical trials on the effects of non-invasive stimulation in Parkinson's disease, dystonia, and ataxia

### 612 Metabolic Movement Disorders
- **19:30 CEST – 21:00 CEST**
- Serena Galosi, Italy
- Buz Jinnah, USA

**CSPC Liaisons:** Jennifer Friedman, USA
Steven Frucht, USA

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

**At the conclusion of this session, participants should be better able to:**
1. Recognize the phenotypic spectrum of movement disorders caused by metabolic diseases that may present in childhood
2. Recognize the phenotypic spectrum of movement disorders caused by metabolic diseases that may present in adulthood

### 705 Movement Disorders Emergencies
- **19:30 CEST – 21:00 CEST**
- Miryam Carecchio, Italy
- Thien Thien Lam, Malaysia

**CSPC Liaisons:** Roongroj Bhidayasiri, Thailand
Shen-Yang Lim, Malaysia

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician)

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

**At the conclusion of this session, participants should be better able to:**
1. Recognize and discuss management strategies for the various Parkinson's disease-related, other hypokinetic, and hyperkinetic emergencies
2. Identify movement disorder emergencies related to Deep Brain Stimulation and other device-aided therapies

### 706 Unusual Presentations of Movement Disorders
- **19:30 CEST – 21:00 CEST**
- Orlando Barsottini, Brazil
- Lucia Ricciardi, United Kingdom

**CSPC Liaisons:** Orlando Barsottini, Brazil
Alberto Espay, USA

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

**At the conclusion of this session, participants should be better able to:**
1. Recognize unusual presentation of selected common movement disorders
2. Develop and approach to the expanding phenotypic presentations of movement disorders
**MDS Virtual Congress 2021**

**SEPTEMBER 17-22**

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**WEDNESDAY, SEPTEMBER 22, 2021**

All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically.

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### 205 Plenary Session

**Update on Alpha-Synuclein Protein: Biology and Pathophysiology**

2:00 CEST – 4:00 CEST

**Chairs:**
- Tiago Outeiro, Germany
- Eng-King Tan, Singapore

**Alpha-synuclein Structures**
- Michel Goedert, United Kingdom

**Update on the Lewy Body**
- Henning Stahlberg, Switzerland

**Mechanisms of Alpha-synuclein Related Neurodegeneration**
- Veerle Baekelandt, Belgium

**CSPC Liaisons:**
- Per Borghammer, Denmark
- Tiago Outeiro, Germany

**Recommended Audience:** Fellow/Resident/Student, Industry, Researcher/Basic Science

**Education Level:** Intermediate/Experienced

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

1. Describe the structures of alpha-synuclein and the relationships with clinical manifestations
2. Discuss the nature and composition of the alpha-synuclein inclusion in the human brain
3. Summarize current knowledge on the mechanisms of alpha-synuclein related neurodegeneration

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### 207 Plenary Session

**Controversies in Movement Disorders**

12:00 CEST – 14:00 CEST

**Chairs:**
- Francisco Cardoso, Brazil
- Glenda Halliday, Australia

**Is clearing of alpha-synuclein aggregates an adequate therapeutic strategy in Parkinson’s disease? (YES)**
- Patrik Brundin, USA

**Is clearing of alpha-synuclein aggregates an adequate therapeutic strategy in Parkinson’s disease? (NO)**
- Alberto Espay, USA

**Should DBS be offered to dystonia patients regardless of etiology? (YES)**
- Joachim Krauss, Germany

**Should DBS be offered to dystonia patients regardless of etiology? (NO)**
- Marie Vidailhet, France

**CSPC Liaisons:**
- Vincenzo Bonifati, Netherlands
- Francisco Cardoso, Brazil

**Recommended Audience:** Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

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

1. Debate whether clearing of alpha-synuclein aggregates is an adequate therapeutic strategy in Parkinson’s disease
2. Debate whether DBS should be offered to dystonia patients regardless of etiology

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### 206 Plenary Session

**Update on Recent Clinical Trials in Parkinson’s Disease**

4:30 CEST – 6:30 CEST

**Chairs:**
- Olivier Rascol, France
- Yih-Ru Wu, Taiwan

**Motor Features**
- Susan Fox, Canada

**Neuropsychiatric and Other Non-motor Features**
- Simon Lewis, Australia

**Disease Modifications**
- Thomas Foltynie, United Kingdom

**CSPC Liaisons:**
- Wassilios Meissner, France
- Andrew Siderowf, USA

**Recommended Audience:** Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

**Education Level:** Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

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

1. Discuss recent clinical trials for symptomatic control of motor features of Parkinson’s disease
2. Review recent clinical trials for neuropsychiatric and other non-motor features of Parkinson’s disease
3. Discuss recent clinical trials and future prospects for disease modification in Parkinson’s disease

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**Symbol Legend:**
- 2021 Themed Session
- 🌕 This session will feature Post-Session Discussion/Networking
- 🌑 This session will feature Top Abstract presentations
- 🌏 To accommodate participants in both the Western and Eastern Hemispheres, this session will launch twice during the Virtual Congress

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www.mdscongress.org
WEDNESDAY, SEPTEMBER 22, 2021

All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically.

To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

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### 208 Plenary Session

**Highlights from 2021: Looking Toward 2022**

**14:30 CEST – 16:30 CEST**

This session will feature Post-Session Discussion/Networking.

**Chairs:**

- Vincenzo Bonifati, Netherlands
- Claudia Trenkwalder, Germany

**Basic Science: Parkinson’s Disease**

- Tiago Outeiro, Germany

**Basic Science: Other Movement Disorders**

- Per Svenningsson, Sweden

**Clinical Studies: Parkinson’s Disease**

- Beomseok Jeon, South Korea

**Clinical Studies: Other Movement Disorders**

- Steven Frucht, USA

**CSPC Liaisons:**

- Vincenzo Bonifati, Netherlands
- Claudia Trenkwalder, Germany

**Recommended Audience:**

- Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

**Education Level:**

- Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

**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 and 2022 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 2021 and 2022

### Congress Closing Remarks

**16:30 CEST – 17:00 CEST**

All participants are encouraged to attend.
THURSDAY, SEPTEMBER 23, 2021

All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically.

To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

207 Plenary Session

Controversies in Movement Disorders
2:00 CEST – 4:00 CEST

Chairs: Francisco Cardoso, Brazil
       Glenda Halliday, Australia

Is clearing of alpha-synuclein aggregates an adequate therapeutic strategy in Parkinson’s disease? (YES)
       Patrik Brundin, USA

Is clearing of alpha-synuclein aggregates an adequate therapeutic strategy in Parkinson’s disease? (NO)
       Alberto Espay, USA

Should DBS be offered to dystonia patients regardless of etiology? (YES)
       Joachim Krauss, Germany

Should DBS be offered to dystonia patients regardless of etiology? (NO)
       Marie Vidailhet, France

CSPC Liaisons: Vincenzo Bonifati, Netherlands
               Francisco Cardoso, Brazil

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

At the conclusion of this session, participants should be better able to:
1. Debate whether clearing of alpha-synuclein aggregates is an adequate therapeutic strategy in Parkinson’s disease
2. Debate whether DBS should be offered to dystonia patients regardless of etiology
3. Debate whether clearing of alpha-synuclein aggregates is an adequate therapeutic strategy in Parkinson’s disease
4. Debate whether DBS should be offered to dystonia patients regardless of etiology

208 Plenary Session

Highlights from 2021: Looking Toward 2022
4:30 CEST – 6:30 CEST

This session will not feature LIVE faculty discussion.

Chairs: Vincenzo Bonifati, Netherlands
       Claudia Trenkwalder, Germany

Basic Science: Parkinson’s Disease
       Tiago Outeiro, Germany

Basic Science: Other Movement Disorders
       Per Svenningsson, Sweden

Clinical Studies: Parkinson’s Disease
       Beomseok Jeon, South Korea

Clinical Studies: Other Movement Disorders
       Steven Frucht, USA

CSPC Liaisons: Vincenzo Bonifati, Netherlands
               Claudia Trenkwalder, Germany

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

Education Level: Beginner/Foundational, Intermediate/Experienced, Advanced/Expert

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 and 2022 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 2021 and 2022

Symbol Legend:
2021 Themed Session; 🌟 This session will feature Post-Session Discussion/Networking; ⭐ This session will feature Top Abstract presentations;
حاد To accommodate participants in both the Western and Eastern Hemispheres, this session will launch twice during the Virtual Congress
NON-CME EDUCATIONAL ACTIVITIES

All Scientific Program sessions will include 30 minutes of LIVE faculty question and answer unless noted specifically.
To verify the session time in your local time zone, please use the following link: https://www.timeanddate.com/worldclock/converter.html

SCIENCE OF INDUSTRY (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 20, 2021

901 Science of Industry (non-CME)

Recent and Ongoing Industry-led Clinical Trial Top Abstracts
17:00 CEST – 19:00 CEST

Chairs: Hubert Fernandez, USA
Andrew Siderowf, USA

CSPC Liaisons: Vincenzo Bonifati, Netherlands
Andrew Siderowf, USA

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science
Education Level: Beginner/Foundational, Experienced, Expert

Tuesday, September 21, 2021

902 Science of Industry (non-CME)

Future of Neuromodulation Strategies
17:00 CEST – 19:00 CEST

Chairs: Helen Bronte-Stewart, USA
Andrea Kühn, Germany

Technical Innovations in Deep Brain Stimulation
Wolf-Julian Neumann, Germany

From Chronic Sensing to Adaptive Stimulation
Scott Stanslaski, USA

From Planning to Programming: The Role of Visualization
Nicholas Maling, USA

CSPC Liaisons: Beomseok Jeon, South Korea
Andrea Kühn, Germany

Recommended Audience: Clinician/General Neurology, Fellow/Resident/Student, Health Professional (non-physician), Industry, Researcher/Basic Science

At the conclusion of this session, participants should be better able to:
1. Discuss ongoing research and innovation in the technologies for DBS
2. Discuss ongoing development towards future adaptive DBS
3. Discuss ongoing development towards new visualization tools in the planning and programming of DBS

SPONSORED SYMPOSIA

These company-based informational sessions will provide attendees with non-CME educational opportunities to learn the latest in therapeutics. Sponsored Symposia will be available on demand for the entirety of the meeting starting Friday, September 17, 2021.

AbbVie
Acadia Pharmaceuticals Inc.
Allergan, an AbbVie Company
BIAL
Boston Scientific
Medtronic
Neurocrine Biosciences (ONGENTYS)
Novo Nordisk
Sunovion Pharmaceuticals Inc.
Zambon SpA
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