New in 2017!

MDS is pleased to introduce a number of new things to experience at the Vancouver International Congress. All delegates are encouraged to take advantage of as many of these opportunities as they can.

**MDS Demo Lab – Ballroom Foyer**
Join MDS Staff and Doctors for hands-on demonstrations of both the MDS E-Learning tools and the MDSGene Database in the MDS Demo Lab.

**MDS Pavilion – Exhibit Hall C**
The MDS Pavilion is the new interactive presentation space designed to provide International Congress delegates with a comfortable lounge atmosphere while presenting valuable information regarding the Society. Learn about various MDS initiatives and programs, gain MDS expert advise, and discover ways to get involved with MDS.

**MDS Member Lounge – Exhibit Hall C**
MDS warmly invites all members to visit the MDS Member Lounge, located in the Exhibit Hall. Members will have the opportunity to enjoy light refreshments, engage with other members or just use this space as a quiet place to work.

**History Exhibits**
Learn about the *History of Canadian Contributions to Movement Disorders* in Ballroom D and visit the *James Parkinson 200 Year History Exhibit* in the Ballroom Foyer.

**Young Delegates Reception – Room 223**
Join your colleagues in Vancouver on Tuesday, June 6, 2017 from 19:30-21:00 at a networking event.

**Basic Science Meet the Experts Networking Sessions**
These sessions will provide young basic scientists an opportunity to network and interact with Basic Science experts in a small group setting.

*Advance registration for this event was required.*

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Be sure to download the official MDS Congress mobile app before arriving in Vancouver, where you can find even more information about times and locations for all of these activities. The app will also help you manage your schedule, assist in networking with other delegates, keep track of all the events happening at the International Congress and much more. Just search “MDS Congress” in your app store.
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https://crowd.cc/s/xRul

Search for MDS Congress

Leave your paper program behind!
The MDS Congress app is your complete resource for:

- Scientific Program
- Abstracts
- Session Evaluations
- Poster Schedules
- Speaker Information

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Welcome to Vancouver

Dear Colleagues,

On behalf of the International Parkinson and Movement Disorder Society (MDS), we are pleased to formally welcome you to the 21st International Congress of Parkinson's Disease and Movement Disorders in Vancouver, BC, Canada.

The city of Vancouver is home to a vast multicultural population, endless activities, and amazing scenery. The city takes advantage of its great location, bordered by the Pacific Ocean and the Coastal mountain range, providing an amazing backdrop no matter where you look.

Each year, the International Congress attracts delegates from around the world who come to learn about the latest research and perspectives, to listen to world renowned speakers, and to be exposed to the most up-to-date information in the field of Movement Disorders.

We are excited to welcome you to Vancouver and hope you will take advantage of the many exciting educational opportunities the 2017 International Congress offers.

With kind regards,

Oscar Gershanik
President, International Parkinson and Movement Disorder Society, 2015-2017

Christine Klein
Chair, Congress Scientific Program Committee, 2015-2017

A. Jon Stoessl
Co-Chair, Congress Scientific Program Committee, 2017
About MDS

MDS Officers (2015-2017)

President
Oscar Gershanik, Argentina

President-Elect
Christopher Goetz, USA

Secretary
Claudia Trenkwalder, Germany

Secretary-Elect
Susan Fox, Canada

Treasurer
David John Burn, United Kingdom

Treasurer-Elect
Victor Fung, Australia

Past-President
Matthew Stern, USA

MDS International Executive Committee
Paolo Barone, Italy
Daniela Berg, Germany
Bastiaan Bloem, Netherlands
Carlos Cosentino, Peru
Beomseok Jeon, Korea
Jeffrey Kordower, USA
Michael Okun, USA
Ryosuke Takahashi, Japan
Louis Tan, Singapore
Mark Stacy, USA

International Congress Oversight Committee
Chair: Philip Thompson, Australia
David John Burn, United Kingdom
Günther Deuschl, Germany
Oscar Gershanik, Argentina
Christopher Goetz, USA
Christine Klein, Germany
Matthew Stern, USA
A. Jon Stoessl, Canada

Congress Scientific Program Committee
Chair: Christine Klein, Germany
Co-Chair: A. Jon Stoessl, Canada
Charles Adler, USA
Tim Anderson, New Zealand
Vincenzo Bonifatti, Netherlands
K. Ray Chaudhuri, United Kingdom

Congress Local Organizing Committee
Chair: A. Jon Stoessl
Silke Appel-Cresswell
Doris Doudet
Matthew Farrow
Wayne Martin
Martin McKeown
Oury Monchi
Vesna Sossi
Joseph Tsui

Marie-Francoise Chesnelet, USA
Carlo Colosimo, Italy
Marina de Koning-Tijssen, Netherlands
Kelly Foote, USA
Steven Frucht, USA
Oscar Gershanik, Argentina
Christopher Goetz, USA
Günter Höglinger, Germany
Beomseok Jeon, Korea
Hyder Jinnah, USA
Micaela Morelli, Italy
Elena Moro, France
Alice Nieuwboer, Belgium
Stéphane Palff, France
Irena Rektorova, Czech Republic
Raymond Rosales, Philippines
Eng-King Tan, Singapore
Philip Thompson, Australia
Lars Timmerman, Germany
Yoshikazu Ugawa, Japan
Miquel Vila, Spain

Past-Presidents
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
E-mail: info@movementdisorders.org
Website: www.movementdisorders.org
Congress Floor Plan

West Exhibition Level

Exhibit Hall C

Exhibition Level
- Exhibits
- Guided Poster Tours
- MDS Member Lounge
- MDS Pavilion
- Posters

West Level 1

Level 1
- Breakout Sessions
- Corporate Therapeutic Symposia
- Exceptional Posters
- History Exhibits
- Late-Breaking and Study Group Posters
- MDS Video Challenge
- Plenary Sessions
- Registration
- Welcome Ceremony
Congress Floor Plan

West Level 2

**Level 2**
- Breakout Sessions
- Corporate Therapeutic Symposia
- Leadership/Faculty Lounge
- MDS Business Meeting
- Regional Assemblies
- Speaker Ready Room

West Level 3

**Level 3**
- Breakout Sessions
Continuing Medical Education (CME) Information

Purpose
The purpose of the 21st International Congress of Parkinson’s Disease and Movement Disorders in Vancouver is to offer a forum for clinical and basic science discussion on a variety of movement disorder topics, including presentations of current research and available treatments.

Learning Objectives
Through state-of-the-art lectures, hot topic reviews, controversy debates, teaching courses, skills workshops and video sessions, participants will be better able to:
1. Describe the pathophysiology and neurobiology of Parkinson’s disease and other movement disorders;
2. Discuss the diagnostic approaches and tools available for Parkinson’s disease and other movement disorders;
3. Discuss the pharmacological and non-pharmacological treatment options available for Parkinson’s disease and other movement disorders.

Accreditation Statement
The International Parkinson and Movement Disorder Society is accredited by the Accreditation Council for Continuing Medical Education (ACME) to provide continuing medical education for physicians.

ACME accreditation covers the following accreditation bodies through a reciprocity agreement:
- Canada: CPD activities held in Canada developed by accredited CPD physician organizations recognized by the Accreditation Council for Continuing Medicine Education are deemed to be Accredited Group Learning Activities (Section1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada.
- EACCME: The UEMS-EACCME® and the AMA recognize each other’s CME credits since 2000. In 2014 the UEMS-EACCME® and the AMA renewed an agreement that European physicians can earn their ECMEC®s worldwide, except in Europe, that have been certified for AMA PRA Category 1 Credits™. For further information on reciprocity, please see the AMA website.

Credit Designation
The International Parkinson and Movement Disorder Society designates this live activity for a maximum of 35 AMA PRA Category 1 Credits™. Physicians should claim only credit commensurate with the extent of their participation in the activity.

Target Audience
The target audience of the 21st International Congress of Parkinson’s Disease and Movement Disorders includes clinicians, researchers, post-doctoral fellows, medical residents, medical students and other healthcare professionals with an interest in the current research and approaches for the diagnosis and treatment of movement disorders.

Financial Disclosure Information
It is the policy of The International Parkinson and Movement Disorder Society (MDS) to ensure balance, independence, objectivity and scientific rigor in all sponsored educational activities. All persons in control of content, including: planners, faculty and reviewers, participating in any MDS sponsored activities are required to disclose to the activity audience any real or apparent conflict(s) of interest that may have a direct bearing on the subject matter of the Continuing Medical Education (CME) activity. This pertains to relationships with pharmaceutical companies, biomedical device manufacturers, or other corporations who have products or services regardless of presentation topic. The intent of this policy is not to prevent a speaker with a potential conflict of interest from making a presentation but to ensure that the speaker can present independent of their financial interest. Any potential conflict should be identified openly so that the listeners may form their own judgments about the presentation with the full disclosure of the facts. It remains for the audience to determine whether the speaker’s outside interest may reflect a possible bias in either the exposition or the conclusions presented.

All financial disclosure information will be available to participants in Vancouver at the MDS membership booth and on the International Congress website: www.mdscongress2017.org

Claiming CME Credit
To claim CME credit for participation in the 21st International Congress for Parkinson’s Disease and Movement Disorders, participants must complete and submit an online CME Request Form.

Instructions for claiming credit:
After June 7, 2017, please visit www.mdscongress2017.org/CongressCME2017
1. Log in after reading the instructions on the page. You will need your International Congress Registration ID which is located on your name badge or registration confirmation. If you do not have your Registration ID e-mail congress@movementdisorders.org
2. Follow the on-screen instructions to claim CME credit for the sessions you attended.
3. You may print your certificate from your home or office, or save it as a PDF for your records.

If you have any questions or need help claiming credit, please contact the MDS International Secretariat at education@movementdisorders.org

Evaluations
All CME Sessions:
Please see the MDS International Congress App for all CME Session evaluations. Evaluations are considered part of the course. All evaluations need to be completed by June 16, 2017. Evaluations can be done in the MDS Congress App and online at https://event.crowdcompass.com/mdscongress2017.
JOIN MORE THAN 6000 COLLEAGUES AT THE THIRD CONGRESS OF THE EUROPEAN ACADEMY OF NEUROLOGY!

www.ean.org/amsterdam2017
Abstract Information

Abstract Publication
All regular accepted abstracts are published as a supplement to the MDS Journal and are available utilizing a searchable feature on the International Congress website, www.mdscongress2017.org/Congress-2017/Abstracts.htm, as of June 4, 2017. Please also visit www.movementdisorders.org to access the Movement Disorders Journal, where you can download a PDF of accepted abstracts.

All registered International Congress delegates will also receive the published abstracts on a USB, available for pickup in the registration area during regular Congress hours.


Guided Poster Tours
Guided Poster Tours give groups of delegates an opportunity to hear discussion on a select group of abstracts in several sub-categories. Attendance is limited and advanced registration is required. Guided Poster Tours require a ticket to attend.

Abstracts selected for a Guided Poster Tour presentation are published in a supplement to the MDS Journal, and can be found on the searchable abstract website.

Late-Breaking Abstracts
All accepted Late-Breaking Abstract posters are displayed in Ballroom D, Monday – Thursday throughout the duration of the International Congress. Late-Breaking Abstract poster presentations will take place Wednesday, June 7, 2017 from 13:15 - 14:45 in Ballroom D.

MDS Study Group Abstracts
All accepted MDS Study Group Abstract posters are displayed in Ballroom D, Monday – Thursday throughout the duration of the International Congress. MDS Study Group Abstract poster presentations will take place Wednesday, June 7, 2017 from 13:15 - 14:45 in Ballroom D.

Poster Sessions
Poster sessions give each delegate an opportunity to view their colleagues’ posters on the most current research in the field of Movement Disorders. Authors will be present for 1.5 hours each day to explain their work and answer questions. All accepted abstracts are presented as a poster at the 2017 International Congress.

Case studies will be displayed and designated at the end of each category. Basic Science and abstracts presented by fellows, residents, or students will be flagged within each category.

Poster sessions are held Monday – Thursday. Posters are available for viewing in Exhibit Hall C from 9:00 – 16:00 Monday through Wednesday, and 9:00 – 15:30 on Thursday. Poster session topics and schedules vary by date; please see the complete listing of scheduled poster presentation dates, times and locations.

Become an Associate Member of MDS

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

Questions? info@movementdisorders.org

MDS Benefits Include:
Peer Reviewed Journals: Movement Disorders and Movement Disorders Clinical Practice
Quarterly Newsletter: Moving Along
Reduced Course Registration Rates
Online Resources: CME Activities; Streaming Content; Teaching Slides; Training Videos; and a Video Library with over 1,800 searchable videos

www.movementdisorders.org/associate-membership

Join over 6,000 movement disorders professionals across the globe in working to disseminate knowledge and promote research to advance the field.
# Abstract Information & Schedules

**Poster Session Schedule (listed by abstract number)**

All poster sessions will take place in Exhibit Hall C.

<table>
<thead>
<tr>
<th>Abstract Numbers:</th>
<th>Category Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 29</td>
<td>Epidemiology</td>
</tr>
<tr>
<td>30 - 31</td>
<td>History</td>
</tr>
<tr>
<td>32 - 158</td>
<td>Parkinson's Disease: Non-Motor Symptoms</td>
</tr>
<tr>
<td>159 - 253</td>
<td>Parkinsonism, MSA, PSP (Secondary and Parkinsonism-Plus)</td>
</tr>
<tr>
<td>254 - 296</td>
<td>Quality of Life/Caregiver Burden in Movement Disorders</td>
</tr>
<tr>
<td>297 - 315</td>
<td>Surgical Therapy: Other Movement Disorders</td>
</tr>
<tr>
<td>316 - 394</td>
<td>Surgical Therapy: Parkinson's Disease</td>
</tr>
</tbody>
</table>

**MONDAY, JUNE 5, 2017  13:45 - 15:15**

<table>
<thead>
<tr>
<th>Abstract Numbers:</th>
<th>Category Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>395 - 426</td>
<td>Drug-Induced Movement Disorders</td>
</tr>
<tr>
<td>427 - 434</td>
<td>Education in Movement Disorders</td>
</tr>
<tr>
<td>435 - 456</td>
<td>Genetics (Non-PD)</td>
</tr>
<tr>
<td>457 - 501</td>
<td>Huntington's Disease</td>
</tr>
<tr>
<td>502 - 611</td>
<td>Parkinson's Disease: Pathophysiology</td>
</tr>
<tr>
<td>612 - 618</td>
<td>Pathophysiology (Other Movement Disorders)</td>
</tr>
<tr>
<td>619 - 641</td>
<td>Rare Genetic and Metabolic Diseases</td>
</tr>
<tr>
<td>642 - 651</td>
<td>Restless Legs Syndrome and Other Sleep Disorders</td>
</tr>
<tr>
<td>652 - 685</td>
<td>Technology</td>
</tr>
<tr>
<td>686 - 741</td>
<td>Therapy in Movement Disorders</td>
</tr>
<tr>
<td>742 - 773</td>
<td>Tremor</td>
</tr>
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</table>

**TUESDAY, JUNE 6, 2017  13:45 - 15:15**

<table>
<thead>
<tr>
<th>Abstract Numbers:</th>
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<tbody>
<tr>
<td>774 - 822</td>
<td>Ataxia</td>
</tr>
<tr>
<td>823 - 833</td>
<td>Choraeas (Non-Huntington's Disease)</td>
</tr>
<tr>
<td>834 - 854</td>
<td>Cognitive Disorders</td>
</tr>
<tr>
<td>855 - 866</td>
<td>Myoclonus</td>
</tr>
<tr>
<td>867 - 896</td>
<td>Neuroimaging (Non-PD)</td>
</tr>
<tr>
<td>897 - 923</td>
<td>Neuropharmacology</td>
</tr>
<tr>
<td>924 - 950</td>
<td>Neurophysiology (Non-PD)</td>
</tr>
<tr>
<td>931 - 1011</td>
<td>Parkinson's Disease: Cognition</td>
</tr>
<tr>
<td>1012 - 1070</td>
<td>Parkinson's Disease: Genetics</td>
</tr>
<tr>
<td>1071 - 1095</td>
<td>Parkinson's Disease: Psychiatric Manifestations</td>
</tr>
<tr>
<td>1096 - 1137</td>
<td>Phenomenology and Clinical Assessment of Movement Disorders</td>
</tr>
<tr>
<td>1138 - 1146</td>
<td>Rating Scales</td>
</tr>
<tr>
<td>1147 - 1156</td>
<td>Spasticity</td>
</tr>
<tr>
<td>1157 - 1167</td>
<td>Tics/Stereotypies</td>
</tr>
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</table>

**WEDNESDAY, JUNE 7, 2017  13:15 - 14:45**

<table>
<thead>
<tr>
<th>Abstract Numbers:</th>
<th>Category Name:</th>
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<tr>
<td>1168 - 1190</td>
<td>Clinical Trials and Therapy in Movement Disorders</td>
</tr>
<tr>
<td>1191 - 1259</td>
<td>Dystonia</td>
</tr>
<tr>
<td>1260 - 1319</td>
<td>Other</td>
</tr>
<tr>
<td>1320 - 1445</td>
<td>Parkinson's Disease: Clinical Trials, Pharmacology and Treatment</td>
</tr>
<tr>
<td>1446 - 1570</td>
<td>Parkinson's Disease: Neuroimaging and Neuropysiology</td>
</tr>
<tr>
<td>1571 - 1576</td>
<td>Pediatric Movement Disorders</td>
</tr>
</tbody>
</table>
## Abstract Information & Schedules

### Poster Session Schedule (listed alphabetically by abstract category)

All poster sessions will take place in Exhibit Hall C.

<table>
<thead>
<tr>
<th>Category Name</th>
<th>Abstract Numbers:</th>
<th>Presentation Date</th>
<th>Presentation Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ataxia</td>
<td>774 - 822</td>
<td>Wednesday, June 7, 2017</td>
<td>13:15 - 14:45</td>
</tr>
<tr>
<td>Choreas (Non-Huntington's Disease)</td>
<td>823 - 833</td>
<td>Wednesday, June 7, 2017</td>
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</tr>
<tr>
<td>Clinical Trials and Therapy in Movement Disorders</td>
<td>1168 - 1190</td>
<td>Thursday, June 8, 2017</td>
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</tr>
<tr>
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<tr>
<td>Tics/Stereotypies</td>
<td>1157 - 1167</td>
<td>Wednesday, June 7, 2017</td>
<td>13:15 - 14:45</td>
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<tr>
<td>Tremor</td>
<td>742 - 773</td>
<td>Tuesday, June 6, 2017</td>
<td>13:45 - 15:15</td>
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</tbody>
</table>
Abstract Information & Schedules

Guided Poster Tour Schedule

All Guided Poster Tours will take place in Exhibit Hall C.

* No Guided Poster Tours on Sunday

<table>
<thead>
<tr>
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<th>MONDAY, JUNE 5, 2017</th>
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<tbody>
<tr>
<td>1</td>
<td>Surgical Therapy</td>
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<td>2</td>
<td>Parkinsonism, Multiple System Atrophy, and Progressive Supranuclear Palsy</td>
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<tr>
<td>3</td>
<td>Parkinson's Disease: Non-Motor Symptoms</td>
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<td>4</td>
<td>Epidemiology and Quality of Life</td>
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<tr>
<td>5</td>
<td>Technology</td>
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<td>7</td>
<td>Pathophysiology</td>
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<td>8</td>
<td>Restless Legs Syndrome and Sleep</td>
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<tbody>
<tr>
<td>9</td>
<td>Ataxia, Chorea</td>
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<td>10</td>
<td>Imaging and Neurophysiology (Non-Parkinson's Disease)</td>
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<tr>
<td>11</td>
<td>Cognition and Psychiatry</td>
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<td>Clinical Phenomenology and Rating Scales</td>
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<tr>
<td>13</td>
<td>Dystonia, Hyperkinetic Movement Disorders and Other</td>
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<td>14</td>
<td>Parkinson's Disease: Pharmacology</td>
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<td>15</td>
<td>Parkinson's Disease: Neuroimaging</td>
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<td>Clinical Trials</td>
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</table>

11
MDS PAVILION

The MDS Pavilion is the new interactive presentation space designed to provide Congress attendees with a comfortable lounge atmosphere while presenting valuable information regarding the Society. Learn about various MDS initiatives and programs, gain MDS-expert advice, and discover ways to get involved with MDS.

The MDS Pavilion will be located in the Exhibition Hall, near the MDS Booth.

Monday, June 5, 2017

Be the One to See: Tips for a Successful Presentation and Distinguishing Yourself from the Crowd
10:00 – 10:30
Presenters: Anthony Lang, Mark Hallett
Presentation Objective: Discuss the best techniques for a successful live presentation and pitfalls to avoid.

Shaping the Future of MDS: How to Get Involved as a Young Neurologist
12:30 – 12:45
Presenters: Matthew Stern, Susan Fox
Presentation Objective: Discuss Young Member / young neurologist’s opportunities offered by MDS and how to get involved.

Welcome to the International Congress First-Time Attendees!
14:00 – 14:15
Presenters: Michael Okun
Presentation Objective: Welcome first-time attendees, highlight not-to-miss sessions and “events”, familiarize the Congress app and more.

Journal Editors Guide: How to Submit a Paper and Get it Accepted in Movement Disorders and Movement Disorders Clinical Practice
15:00 – 15:30
Presenters: José Obeso, Kailash Bhatia
Presentation Objective: Provide step-by-step instructions and advice to get your paper published in the MDS Journals.

Tuesday, June 6, 2017

Young Members Group: Guide to Getting Active with The Society
10:00 – 10:30
Presenters: Thiago Cardoso Vale, Santiago Perez-Lloret
Presentation Objective: The MDS Young Members Group discusses MDS resources for young neurologists, groups to join and how to work side-by-side with the experts.

Pop-up Discussion #1: Session Follow-up and Continued Discussion
10:30 – 11:00
Presenters: TBD (Congress faculty)
Presentation Objective: Continue discussion from a highly attended/interesting session and answer questions submitted by session attendees via the Congress app.

Getting to know MDS President, Dr. Oscar Gershanik
12:30 – 12:45
Presenter: Oscar Gershanik
Presentation Objective: Be inspired by Dr. Gershanik’s professional journey and gain insight from an MDS expert.

How to Get Involved: MDS Study Groups and Special Interest Groups
13:15 – 13:30
Presenters: K. Ray Chaudhuri, Terence Sanger
Presentation Objective: Group Chairs discuss which MDS programs are open to the general MDS Member and how to get involved.

LIVE Demo: How to Initiate a Movement Disorders Exam
14:15 – 14:45
Presenters: Brandon Barton, Victor Fung
Presentation Objective: Demonstrate the best practices to make the most out of your patient exam time.

Meet the Grand Rounds Experts
15:15 – 15:30
Presenters: Giovanni Fabbrini, Susan Fox, Carolyn Sue, Marie Vidailhet
Presentation Objective: Live discussion on preferred examination tactics, advice, general exam techniques and tips prior to the Grand Rounds Session (Wednesday).
MDS Pavilion

Wednesday, June 7, 2017

**Pop-up Discussion #2: Session Follow-up and Continued Discussion**
9:30 – 10:00
Presenters: TBD (Congress faculty)
Presentation Objective: Continue discussion from a highly attended/interesting session and answer questions submitted by session attendees via the Congress app.

**MDS Regional Congress Highlights**
12:00 – 12:30
Presenters: Cynthia Comella, Beomseok Jeon, Louis Tan
Presentation Objective: Discuss successes, learnings and highlights from the 1st MDS-PAS Congress and AOPMC, and hear about the themed sessions for the 2018 International Congress.

**How to Submit a Successful MDS Congress Abstract**
13:00 – 13:15
Presenters: Christine Klein, A. Jon Stoessl
Presentation Objective: Explain what MDS is looking for in a top scoring abstract; what should be included, what to leave out.

**Becoming Congress Faculty: How Congress Sessions are Developed and How to Get Involved**
14:00 – 14:15
Presenters: David John Burn, Hyder Jinnah
Presentation Objective: Instruct the delegates on how to submit session suggestions, faculty suggestions, and summarize how the Congress scientific program is created.

**Task Force on Technology Updates**
14:45 – 15:00
Presenters: Alberto Espay, Spyros Papapetropoulos
Presentation Objective: Discuss the Task Force's new advancements in Movement Disorder technologies and data analytics.

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Thursday, June 8, 2017

**MDS Rating Scales Growth and Progress**
9:30 – 10:00
Presenter: Pablo Martinez-Martin, Glenn Stebbins
Presentation Objective: Discuss where MDS Rating Scales are today and what is on the horizon.

**Pop-up Discussion #3: Session Follow-up and Continued Discussion**
12:00 – 12:30
Presenters: TBD (Congress faculty)
Presentation Objective: Continue discussion from a highly attended/interesting session and answer questions submitted by session attendees via the Congress app.
Session Definitions

**Blue Ribbon Highlights**
This session will provide a critical review of the best poster presentations by a panel of experts, highlighting the relevance, novelty and quality of both clinical and basic science research presented by the delegates.

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

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

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

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

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

**Poster Sessions**
Poster sessions give each delegate an opportunity to view their colleagues’ posters on the most current research in the field of Movement Disorders. Authors will be present for 1.5 hours each day to explain their work and answer questions.

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

**Teaching Courses**
These educational programs provide up-to-date information focused on a single topic. The sessions highlight both the clinical and basic science of topics of relevance to Movement Disorder specialists. The sessions are unique in providing a syllabus that includes a review of the topic and the presentation slides. In addition, these programs provide ample time for questions and a discussion period at the conclusion of the presentations.

**Therapeutic Plenary Sessions**
These sessions provide the latest information regarding the scientific and clinical evidence supporting treatment options for Parkinson’s disease and other movement disorders.

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

**International Congress Theme:**
At each annual International Congress, the Congress Scientific Program Committee selects a theme that is highlighted throughout the meeting. This year’s theme, Pathophysiology of Basal Ganglia Disorders: From Cell to System to Patient, will be showcased in two Plenary Sessions, nine Parallel Sessions, one Skills Workshop, and one Teaching Course. International experts will serve as faculty, and the meeting participants can elect to attend any or all of these sessions. Themed sessions are designated in the program with 📌.
### Schedule-At-A-Glance

<table>
<thead>
<tr>
<th>Sunday, June 4, 2017</th>
<th>Monday, June 5, 2017</th>
<th>Tuesday, June 6, 2017</th>
<th>Wednesday, June 7, 2017</th>
<th>Thursday, June 8, 2017</th>
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<td>10:00</td>
<td>Regional Assemblies</td>
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<td>Break</td>
<td>Blue Ribbon Highlights</td>
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<td>Corporate Therapeutic Symposia 12:45 - 13:15</td>
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<td>Skills Workshops/Video Sessions 18:00 - 19:30</td>
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<td>21:00</td>
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<td>MDS Video Challenge</td>
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<td>21:30</td>
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<td>19:00 - 22:00</td>
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Sunday, June 4, 2017

**1101 Therapeutic Plenary Session**

**Treating Motor Complications of Parkinson’s Disease**

**8:00 – 10:00**

**Location:** Ballroom A

**Chairs:**
- Bettina Debu, Grenoble, France
- Oscar Gershanik, Buenos Aires, Argentina

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Disease Related Motor Complications: Gait, Posture, Balance</td>
<td>Bettina Debu, Grenoble, France</td>
</tr>
<tr>
<td>8:40</td>
<td>Understanding Motor Fluctuations and Dyskinesias: Clinical Aspects, Pathophysiology, Risk Factors</td>
<td>Han-Joon Kim, Seoul, Korea</td>
</tr>
<tr>
<td>9:20</td>
<td>Prevention, Treatment and Management of Motor Fluctuations and Dyskinesias</td>
<td>Jean-Christophe Corvol, Paris, France</td>
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</tbody>
</table>

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

At the conclusion of this session, participants should be better able to:
1. Identify and manage disease related motor complications
2. Recognize medication induced motor complications and understand their pathophysiology and risk factors
3. Apply preventive measures, and both conventional and novel therapeutic interventions, to manage levodopa-induced motor complications

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**1102 Therapeutic Plenary Session**

**Treatment of Dystonia**

**11:00 – 13:00**

**Location:** Ballroom A

**Chairs:**
- Marina De Koninck-Tijssen, Groningen, Netherlands
- Hyder Jinnah, Atlanta, GA, USA

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<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>11:00</td>
<td>Assessment and Classification as the First Step in Expert Management</td>
<td>Alberto Albanese, Razzano, Italy</td>
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<tr>
<td>11:40</td>
<td>Medical Treatment (including Botulinum Toxins)</td>
<td>Mandal Jog, London, ON, Canada</td>
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<tr>
<td>12:20</td>
<td>Surgical Treatment (including Deep Brain Stimulation)</td>
<td>Joachim Krauss, Hanover, Germany</td>
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</tbody>
</table>

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

At the conclusion of this session, participants should be better able to:
1. Recognize diagnostic challenges for different types of dystonia and implement the current classification system for the dystonias
2. Recognize the issues involved in selecting the best options for treating patients with dystonia syndromes
3. Describe treatment principles for dystonia syndromes, including medical and surgical options

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**1103 Therapeutic Plenary Session**

**Update on the Treatment of Hyperkinetic Movement Disorders**

**14:30 – 16:30**

**Location:** Ballroom A

**Chairs:**
- Jonathan Mink, Rochester, NY, USA
- Raymond Rosales, Manila, Philippines

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<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>14:30</td>
<td>Chorea in the Clinic: Which One and Which Treatment?</td>
<td>Pichet Termsarasab, Cleveland Heights, OH, USA</td>
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<tr>
<td>15:10</td>
<td>Tic Disorders: Diagnosis and Treatment</td>
<td>Jonathan Mink, Rochester, NY, USA</td>
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</tbody>
</table>

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

At the conclusion of this session, participants should be better able to:
1. Recognize the different causes and treatment of chorea
2. Describe the different causes and treatment of tic disorders
3. Identify the different causes and treatment of myoclonus

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**1104 Therapeutic Plenary Session**

**Update on Neurosurgical Interventions for Movement Disorders**

**17:00 – 19:00**

**Location:** Ballroom A

**Chairs:**
- Kelly Foote, Gainesville, FL, USA
- Elena Moro, Grenoble, France

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<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>17:00</td>
<td>MRI-Guided Focal Ultrasound Lesions: Present and Future</td>
<td>Binit Shah, Charlottesville, VA, USA</td>
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<td>17:40</td>
<td>Updates on Gamma-Knife Treatment</td>
<td>Jean Regis, Marseille, France</td>
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<tr>
<td>18:20</td>
<td>Emerging Interventions in Deep Brain Stimulation</td>
<td>Peter Brown, Oxfordshire, United Kingdom</td>
</tr>
</tbody>
</table>

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

At the conclusion of this session, participants should be better able to:
1. Describe non-invasive lesion therapies for movement disorders
2. Recognize indications for the available ablative and neuromodulatory neurosurgical techniques in movement disorders
3. Discuss recent technological advances in DBS for movement disorders such as directional stimulation and adaptive stimulation

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**Welcome Ceremony**

**19:30 – 21:30**

**Location:** Ballroom A

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**AOS Regional Assembly**

**10:00 – 11:00**

**Location:** Room 204

All delegates from Asia and Oceania are encouraged to attend.

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**ES Regional Assembly**

**10:00 – 11:00**

**Location:** Room 207

All delegates from Europe and North Africa are encouraged to attend.

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**PAS Regional Assembly**

**10:00 – 11:00**

**Location:** Room 221

All delegates from Pan America are encouraged to attend.
Monday, June 5, 2017

2101  Plenary Session

**Presidential Lectures**
8:00 – 10:00

- Location: Ballroom A
- Chairs: Oscar Gershanik
  Buenos Aires, Argentina
  Christopher Goetz
  Chicago, IL, USA

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

8:00  Stanley Fahn Lecture: Advancing the Movement Disorders Needle – The Saskatchewan Way
Ali Rajput
Saskatoon, SK, Canada

At the conclusion of this session, participants should be better able to:
Illustrate that the small size of an institution is not always a handicap to research; and to share examples of our work that advanced the knowledge of Movement Disorders

8:30  Junior Award Lectures
Ziv Gan-Or
Montreal, QC, Canada
Vladana Markovic
Belgrade, Serbia
Raul Martinez-Fernandez
Madrid, Spain

9:30  C. David Marsden Lecture: Clues to Disease Mechanisms from the Types and Patterns of Cellular Pathologies in the Brain
Glenda Halliday
Randwick, NSW, Australia

At the conclusion of this session, participants should be better able to:
Describe the motivation for the Phase III clinical neuroprotection trial in early stage Parkinson's disease with the dihydropyridine isradipine

2102  Plenary Session, cont.

**Pathophysiological Underpinnings of Clinical Manifestations**
10:30 – 12:30

- Location: Ballroom A
- Chairs: David Eidelberg
  Marshfield, NY, USA
  A. Jon Stoessl
  Vancouver, BC, Canada

10:30  Pathophysiology of Motor Dysfunction
John Rothwell
London, United Kingdom

2103  Parallel Session

**Imaging in Model Systems of Basal Ganglia Function**
15:30 – 17:30

- Location: Room 207
- Chairs: Bernd Pichler
  Tübingen, Germany
  Vesna Sassi
  Vancouver, BC, Canada

At the conclusion of this session, participants should be better able to:
1. Describe functional alterations in brain circuitry and in disorders of the basal ganglia, and their modulation by pharmacologic and surgical treatment
2. Recognize changes in network expression and brain neurochemistry that may delay the onset and mitigate the expression of symptoms in subjects with basal ganglia disorders and how these mechanisms may also ultimately contribute to unwanted outcomes
3. Recognize the role of dopamine in learning, attribution of salience and decision making, and how both disease and its treatment can result in impaired learning, apathy and impulsivity

Guided Poster Tours

**Guided Poster Tour 1:**
Surgical Therapy
13:45 – 15:15

**Guided Poster Tour 2:**
Parkinsonism, Multiple System Atrophy, and Progressive Supranuclear Palsy
13:45 – 15:15

**Guided Poster Tour 3:**
Parkinson's Disease: Non-Motor Symptoms
13:45 – 15:15

**Guided Poster Tour 4:**
Epidemiology and Quality of Life
13:45 – 15:15

2204  Parallel Session

**Repeat Expansion Disorders: From Cell to System to Patient**
15:30 – 17:30

- Location: Room 221
- Chairs: Alexis Brice
  Paris, France
  Luis Velázquez-Pérez
  Holguín, Cuba

At the conclusion of this session, participants should be better able to:
1. Recognize the contributions of optogenetics to the study of basal ganglia circuitry
2. Describe how modern optical techniques can be used to study the dynamic nature and function of glial and microglial cells in order to better understand their role in disease
3. Recognize emerging advances in hybrid PET-MR and PET-MR-EEG imaging

**Repeat Expansion Disorders – Movement Disorders and More**
16:10

- Location: Room 221
- Chairs: Alexis Brice
  Paris, France

**Spinocebellar Ataxias (SCAs)**
Luis Velázquez-Pérez
Holguín, Cuba
<table>
<thead>
<tr>
<th>Time</th>
<th>Parallel Session</th>
<th>Title</th>
<th>Location</th>
<th>Chairs</th>
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<tr>
<td>16:50</td>
<td>2204</td>
<td>Fragile X Tremor-Ataxia</td>
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<td>Deborah Hall</td>
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<td>Chicago, IL, USA</td>
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<td>Recommended Audience: Basic Scientists, Clinical Academicians,</td>
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<td>expansion disorders and discuss the broad phenotype,</td>
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<td>2. Describe the various subtypes of ataxia and mechanisms</td>
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<td>of pathogenesis associated with triplet repeat expansions</td>
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<td>3. Describe the pleomorphic phenotypes and mechanisms of</td>
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<td>pathogenesis associated with abnormal expansions of the FMR1 gene</td>
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<td>15:30</td>
<td>2205</td>
<td>Pediatric Movement Disorders</td>
<td>Room 204</td>
<td>Jonathan Mink</td>
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<td>Baltimore, MD, USA</td>
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<td>Harvey Singer</td>
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<td>1. Provide a perspective of the importance of triplet</td>
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<td>expansion disorders and discuss the broad phenotype,</td>
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<td>including combined neuromuscular and movement disorders</td>
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<td>2. Describe the various subtypes of ataxia and mechanisms</td>
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<td>of pathogenesis associated with triplet repeat expansions</td>
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<td>pathogenesis associated with abnormal expansions of the FMR1 gene</td>
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<td>16:10</td>
<td>2206</td>
<td>Movement Disorders in Paraneoplastic and Autoimmune Disease</td>
<td>Ballroom C</td>
<td>Sarahish Irani</td>
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<td>15:30 – 17:30</td>
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<td>Oxford, United Kingdom</td>
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<td>Recommended Audience: Basic Scientists, Clinical Academicians,</td>
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<td>Philip Thompson</td>
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<td>Practitioners, Students/Residents/Trainees</td>
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<td>Adelaide, SA, Australia</td>
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<td>15:30 Autoimmune Encephalopathies</td>
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<td>Sarosh Irani</td>
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<td>Oxford, United Kingdom</td>
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<td>Sydenham’s Chorea</td>
<td>Hilla Ben-Pazi</td>
<td>Jerusalem, Israel</td>
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<td>16:10 Paraneoplastic Movement Disorders</td>
<td>Sean Pittock</td>
<td>Rochester, MN, USA</td>
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<td>Recommended Audience: Basic Scientists, Clinical Academicians,</td>
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<td>1. Recognize the mechanisms and treatment implications</td>
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<td>for unusual autoimmune encephalopathies affecting adults and</td>
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<td>children</td>
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<td>2. Describe the role of immune modulation in the</td>
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<td>treatment of severely affected patients with</td>
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<td>Sydenham’s chorea</td>
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<td>3. Understand recent advances in the diagnosis and</td>
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<td>management of cell mediated and humoral mediated</td>
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<td>paraneoplastic movement disorders</td>
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<td>16:50</td>
<td>2207</td>
<td>Monogenic Movement Disorders in the Next Generation Sequencing Era</td>
<td>Room 211</td>
<td>Thomas Bird</td>
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<td>15:30 – 17:30</td>
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<td>Katja Lohmann</td>
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<td>Recommended Audience: Basic Scientists, Clinical Academicians,</td>
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<td>Lübeck, Germany</td>
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<td>1. Identify the new research strategies enabled by the NGS-technologies</td>
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<td>such as whole-exome and whole-genome sequencing, and the</td>
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<td>recently identified mutations associated with monogenic</td>
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<td>parkinsonism (including TMEM230, VPS13C, SYNU1, and DNAJC6)</td>
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<td>2. Discuss the recently identified genetic mutations</td>
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<td>causing isolated dystonia, and the implications for the</td>
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<td>understanding of the disease pathogenesis</td>
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<td>3. Discuss the recently identified monogenic hyperkinetic</td>
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<td>disorders with pleomorphic phenotypes (including ADCYS, FOXG1,</td>
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<td>PDE10A, and ATP1A3)</td>
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<td>15:30</td>
<td>2208</td>
<td>Integrated Management of Movement Disorders: Is It Needed in All</td>
<td>Room 302</td>
<td>Bastiaan Bloem</td>
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<td>Stages?</td>
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<td>Daniel Corcos</td>
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<td>15:30 – 17:30</td>
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<td>Chicago, IL, USA</td>
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<td>Recommended Audience: Basic Scientists, Clinical Academicians,</td>
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<td>better able to:</td>
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<td>1. Identify the clinical characteristics and underlying</td>
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<td>neurobiology of repetitive movements in children</td>
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<td>2. Diagnose metabolic diseases in children</td>
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<td>3. Describe the problem of transition from pediatric into</td>
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<td>adult neurology</td>
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Monday, June 5, 2017

2309 Teaching Course [TICKET]
Neuroimaging Techniques of Systems Neuroscience
15:30 – 17:30
Location: Room 119
Chairs: Paola Piccini
London, United Kingdom
Irena Rektorova
Brno, Czech Republic
15:30 Principles of Tractography
Paola Piccini
London, United Kingdom
16:10 Imaging the Human Connectome
Shunsuke Kobayashi
Fukushima, Japan
16:50 Principles of Molecular Imaging
Paola Piccini
London, United Kingdom
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Identify MRI approaches to study structural brain connectivity and interpret results in movement disorder clinics and research
2. Describe principles of functional connectivity analysis and understand how functional MRI can be used to study neural correlates of brain pathology, compensation and treatment effects
3. Describe methods of molecular imaging to assess dopamine release, dopamine transporter activity and other neurotransmitter changes in the human striatum and cortex in movement disorders

2310 Teaching Course [TICKET], cont.
16:50 How to Evaluate and Treat Cognitive and Psychiatric Disturbances in Parkinson’s Disease
Jennifer Goldman
Chicago, IL, USA
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Describe the prevalence, pathophysiology, diagnosis, and management of constipation, urinary dysfunction, sexual dysfunction and orthostatic hypotension in Parkinson’s disease
2. Indicate the pathophysiology of sleep disorders in Parkinson’s disease as well as the evaluation and treatment of insomnia, somnolence, sleep apnea, and REM sleep behavior disorder in Parkinson’s disease
3. Recognize the key features for the recognition, diagnosis and treatment of depression, anxiety, hallucinations and psychotic disorders in Parkinson’s disease

2311 Skills Workshop [TICKET]
Functional Capacity in Parkinson’s Disease: How Can Practice Help?
18:00 – 19:30
Location: Room 211
Elke Heremans
Heverlee, Belgium
Ingrid Sturkenboom
Nijmegen, Netherlands
This interactive session will tackle what matters most to patients with Parkinson’s disease: the disease impact on daily function. This session will clarify how physiotherapy and occupational therapy can contribute to improving function and which training methods translate best into functional gains as supported by scientific evidence.

2312 Skills Workshop [TICKET]
Which Targeting Technique for Botulinum Toxin Injections?
18:00 – 19:30
Location: Room 204
Joseph Tsui
Vancouver, BC, Canada
Uwe Walter
Rostock, Germany
This interactive session is intended to provide the participant with a practical way to analyze simple and complex cases of dystonia and spasticity, and to select the best tools for muscle targeting during botulinum toxin treatment.
Recommended Audience: Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Discuss the pros and cons of EMG vs. anatomical landmarks to inject BoNT
2. Identify key muscles in the neck and limbs by sonoacoustic properties
3. Recognize the benefits and limitations of different targeting techniques to guide BoNT muscle injections

2411 Skills Workshop [TICKET]
Post-Surgical Management of Deep Brain Stimulation Theraeries
18:00 – 19:30
Location: Room 302
Genko Oyama
Tokyo, Japan
Maria Rodriguez-Oroz
Pamplona, Spain
In this interactive session, the faculty will present tricks and skills for optimizing deep brain stimulation with respect to motor and non-motor effects.
Recommended Audience: Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Apply strategies to optimize motor effects in Parkinson’s disease
2. Employ programming tricks to avoid non-motor side effects of deep brain stimulation in Parkinson’s disease
3. Identify methods in adjusting Parkinson’s disease medication post-operatively with respect to motor and non-motor symptoms
Monday, June 5, 2017

2414  Skills Workshop  
Lessons from My Patients  
18:00 – 19:30

Location: Room 109  
Susan Bressman  
New York, NY, USA  
Barry Snow  
Auckland, New Zealand

In this interactive session, the faculty will present cases from their own practice and discuss the lessons learned when follow-up and critical reappraisal of clinical features has led to a revision of diagnosis and change in management.

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

At the conclusion of this session, participants should be better able to:
1. Recognize the value of critical review of cases where diagnosis and management have been revised
2. Identify common pitfalls in the evaluation of movement disorders
3. Recognize the merits of reassessing clinical features and management

2415  Skills Workshop  
The Challenge of Molecular Genetics for the Clinician  
18:00 – 19:30

Location: Room 221  
Alexandra Durr  
Paris, France  
Marialuisa Quadri  
Rotterdam, Netherlands

In this interactive session, the faculty will present opportunities and challenges of genetic testing in the “next-generation sequencing” era. The different types of testing will be discussed (e.g. mutations, genes, gene panels, gene filters, whole-exome and whole-genome sequencing), as well as the challenges in the interpretation of the results, and the ethical implications.

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

At the conclusion of this session, participants should be better able to:
1. Discuss the “when”, “what”, and “how” of genetic testing (including mutations, genes, gene panels, gene filters, WES, WGS)
2. Discuss the challenges in the interpretation of the results of genetic testing (including pathogenicity of novel variants, variants of unknown significance)
3. Debate the ethical and emerging issues in genetic testing (including informed consent, ethical issues, secondary findings from WES or WGS; storage and re-analysis of NGS data)

2516  Video Session  
Movement Disorders in Autoimmune Diseases  
18:00 – 19:30

Location: Room 119  
Bettina Balint  
London, United Kingdom  
Andrew McKeon  
Rochester, MN, USA

In this interactive session, the faculty will demonstrate how to identify and investigate autoimmune movement disorders, and what treatments are available.

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

At the conclusion of this session, participants should be better able to:
1. Identify movement disorders associated with autoimmune diseases
2. Identify the range of antibodies associated with movement disorders phenotypes
3. Determine appropriate investigations and therapies for movement disorders of autoimmune origin

2517  Video Session  
Update on Paroxysmal Movement Disorders  
18:00 – 19:30

Location: Ballroom C  
Roberto Erro  
Verona, Italy  
Jennifer Friedman  
San Diego, CA, USA

In this interactive session, the faculty will explain how to recognize and clinically approach patients with paroxysmal movement disorders. Diagnostic strategies, including genetics, will be discussed, not only for classical forms, but also for the new variants of paroxysmal movement disorders.

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

At the conclusion of this session, participants should be better able to:
1. Characterize paroxysmal disorders, both classical forms and new variants
2. Identify the diagnostic clues and treatment options in paroxysmal movement disorders
3. Define the latest in management of acquired choreas

2518  Video Session  
Acquired Choreas: What is New?  
18:00 – 19:30

Location: Room 207  
Kalyan Bhattacharyya  
Kolkata, India  
Michael Samuel  
London, United Kingdom

This video session will review and illustrate one of the most challenging aspects of movement disorders, i.e. choreas; its origins, its many-faceted clinical presentations, the complexity of differential diagnosis, and management strategies.

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

At the conclusion of this session, participants should be better able to:
1. Describe the different aspects of the etiology of acquired choreas
2. Recognize the phenomenology of acquired choreas as well as differential diagnosis with other movement disorders
3. Define the latest in management of acquired choreas
Tuesday, June 6, 2017

3101  Plenary Session
Disease Mechanisms of Parkinson's Disease: From Cell to System
8:00 – 10:00
Location: Ballroom A
Chairs: Marie-Francoise Chesselet Los Angeles, CA, USA
Andrew West Birmingham, AL, USA
8:00 Lysosomal Dysfunction and the Relevance of GBA Mutations to Parkinson's Disease
Anthony Schapira London, United Kingdom
8:40 Axonal Transport and Membrane Sorting
Matthew Seaman Cambridge, United Kingdom
9:20 Neuroinflammation
Andrew West Birmingham, AL, USA
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Describe the cell biological mechanism related to Parkinson's disease genetic and sporadic forms
2. Recognize how these cell biological changes influence cells in several organ systems
3. Recognize how cell disease mechanisms in Parkinson's disease can provide diverse and wide-spread changes and opportunities for biomarkers

MDS Business Meeting
10:00 – 11:00
Location: Room 207
All delegates are encouraged to attend.

3102  Plenary Session, cont.
Molecular Imaging in Huntington's Disease - Recent Advances
Andrea Varrone Stockholm, Sweden
12:00 Emerging Therapies in Huntington's Disease: Promises and Challenges
Blair Leavitt Vancouver, BC, Canada
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Recognize recent developments in genetics of Huntington's disease including the impact of gene modifiers identified in GWAS
2. Identify a comprehensive view of molecular imaging biomarkers to study Huntington's disease including recent advances in the development of a Huntington's PET Tracer
3. Describe the emergent therapies in Huntington's disease and to recognize their potential strengths and limitations

3203 Parallel Session
Promises of Induced Pluripotent Stem Cells: From Modeling to Therapy
15:30 – 17:30
Location: Room 221
Chairs: Steven Finkbeiner San Francisco, CA, USA
Nobutaka Hattori Tokyo, Japan
15:30 iPSC-Derived Neuronal Models for Basal Ganglia Diseases
Steven Finkbeiner
San Francisco, CA, USA
16:10 From Neurons to Brain Organoids
Nobutaka Hattori Tokyo, Japan
16:50 Application of iPSC-Derived Models and Novel Therapeutic Approaches
Brent Ryan Oxford, United Kingdom
Recommended Audience: Basic Scientists, Clinical Academicians, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Describe how iPSC-derived neuronal cultures can serve as a model for basal ganglia diseases
2. Identify how brain organoids can be generated from iPSC-derived neurons
3. Evaluate how iPSC-derived models can be employed to develop new therapeutic approaches

3204 Parallel Session
Imaging Genetics and Pathophysiology in Humans
15:30 – 17:30
Location: Room 204
Chairs: Doris Doudet Vancouver, BC, Canada
Wayne Martin Edmonton, AB, Canada
15:30 Neurotransmitter Studies in Genetic Disease and Prodromal Populations
Marios Politis London, United Kingdom
16:10 Structural and Functional Connectivity
Hartwig Siebner Hvidovre, Denmark
3204 Parallel Session
16:50 Imaging Pathology - Inflammation and Abnormal Protein
Vesna Sossi
Vancouver, BC, Canada
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Describe changes in monoamine and other neurotransmitters seen in prodromal stages of genetic Parkinson's disease and REM behavior disorder
2. Recognize changes in structural connectivity associated with prodromal and established Parkinson's disease and its complications
3. Assess the current status of tracers designed to assess disease pathology, including inflammation and abnormal protein accumulation

3205 Parallel Session
15:30 – 17:30
Location: Ballroom C
Chairs: Michael Schlossmacher
Ottawa, ON, Canada
Matthew Stern
Philadelphia, PA, USA
15:30 Imaging Pathology of Neurodegenerative Movement Disorders: Why is it Important and So Difficult?
Per Borghammer
Aarhus, Denmark
16:10 New Genes, New Mechanisms: Why Do We Care?
Niccolò Mencacci
London, United Kingdom
16:50 Biomarkers and Clinical Trials: Where are We?
Michael Schlossmacher
Ottawa, ON, Canada
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Describe the progress and challenges of brain imaging in neurodegenerative disorders
2. Identify recent progress in linking genetic information to disease mechanisms and their implication for translation to clinically meaningful outcomes
3. Recognize current efforts in developing clinical, genetic and other biomarkers and critique their use in clinical trials

3206 Parallel Session
Management of Common Axial Problems in Advanced Parkinson's Disease
15:30 – 17:30
Location: Room 302
Chairs: Yaël Manor
Tel Aviv, Israel
Alice Nieuwboer
Heverlee, Belgium
15:30 Effective Pharmacological and Surgical Treatment Strategies for Common Late Stage Axial
Caroline Moreau
Marq en Baroeul, France
16:10 Speech and Respiratory Therapy Options to Treat Hypophonic Dysarthria and Prevent Dysphagia
Yaël Manor
Tel Aviv, Israel
16:50 When Recurrent Falls and Postural Instability are Prevalent, is Rehabilitation Too Late?
Colleen Canning
Sydney, NSW, Australia
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Identify the differences of apoptosis-inducing dopamine neuronal degeneration in humans and experimental animals
2. Assess pathogenic mechanisms of striatal transmission in Parkinson's disease and in the long-term complications arising from dopaminergic therapy
3. Recognize how to manage complications related to aberrant synaptic plasticity

3207 Parallel Session
Function and Dysfunction of the Synapse
15:30 – 17:30
Location: Room 207
Chairs: Micaela Morelli
Cagliari, Italy
José Obeso
Madrid, Spain
15:30 Modulation of the Synapse in the Normal and Denervated Striatum
Christian Pfif
Wien, Austria
16:10 Therapeutic Complications Arising from Synaptic Dysfunction
Manolo Carta
Cagliari, Italy
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Apply the MDS-criteria for the diagnosis of Progressive Supranuclear Palsy
2. Identify the most appropriate imaging modalities for the diagnosis and progression measurement of Progressive Supranuclear Palsy
3. Recognize state of the art therapies for Progressive Supranuclear Palsy and understand concepts of current therapeutic trials

3208 Parallel Session
Progressive Supranuclear Palsy: Towards Early Diagnosis and Causal Therapies
15:30 – 17:30
Location: Room 211
Chairs: Adam Boxer
San Francisco, CA, USA
Günter Höglinger
Munich, Germany
15:30 The MDS-Criteria for Diagnosis of Progressive Supranuclear Palsy
Christer Nilsson
Lund, Sweden
16:10 Imaging the Diagnosis and Progression of Progressive Supranuclear Palsy
Jennifer Whitwell
Rochester, MN, USA
16:50 Current and Future Therapies for Progressive Supranuclear Palsy
Adam Boxer
San Francisco, CA, USA
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Identify the underlying mechanisms of common axial problems in advanced Parkinson's disease and the best prevailing medical treatment options
2. Recognize the efficacy of behavioral interventions to alleviate speech and swallowing problems
3. Summarize existing rehabilitation approaches for reducing postural instability and recurrent falls
Tuesday, June 6, 2017

3309 Teaching Course [TICKET]
Clues in the Clinical Examination of Movement Disorders
15:30 – 17:30
Location: Room 109
Chairs: Peter Bain
Richmond, United Kingdom
Francisco Cardoso
Belo Horizonte, Brazil
15:30 Tips in Tremor
Peter Bain
Richmond, United Kingdom
16:10 Pointers in Parkinsonism
Vincent Mok
Shatin, People's Republic of China
16:50 Hints for Hyperkinetic Movement Disorders
Emilia Gatto
Buenos Aires, Argentina
Recommended Audience: Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Perform examination techniques that help in the differential diagnosis of tremor
2. Utilize the examination of patients with parkinsonism to reveal signs that characterize different akinetic-rigid syndromes
3. Elicit and recognize examination features that characterize different hyperkinetic movement disorders

3310 Teaching Course [TICKET], cont.
Classification, Pathogenesis, and Management of Dystonia
15:30 – 17:30
Location: Room 119
Chairs: Petr Kanovsky
Oломouc, Czech Republic
Christine Klein
Lübeck, Germany
15:30 Applying the Dystonia Classification to Your Patient
Petr Kanovsky
Oломouc, Czech Republic
16:10 Pathogenesis of Dystonia
Aloysius Domingo
Lübeck, Germany
16:50 Current Treatments in Dystonia
Takahiro Mezaki
Tokamatsu, Japan
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Describe the classification and diagnosis of dystonia
2. Discuss the disease mechanisms and genetics underlying dystonia
3. Recognize the available medical and surgical treatments for dystonia including expected outcomes

Basic Science Meet the Experts Networking Session #1
17:00 – 19:00
Location: Room 306
Attendance to this event required pre-registration.

3411 Skills Workshop [TICKET]
How to Interpret Systems Neuroscience Findings
18:00 – 19:30
Location: Room 221
Rudi Balling
Luxembourg, Germany
Alfons Schnitzler
Düsseldorf, Germany
This interactive session will help participants to better navigate the growing field of important and complex discoveries in systems neurosciences related to basal ganglia function and dysfunction. Participants will learn how to select, analyze and implement the most relevant neuroscience findings from an integrative perspective.
Recommended Audience: Basic Scientists, Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees

3412 Skills Workshop [TICKET]
Telemedicine and Technology in Parkinson’s Disease Management: The Why, What and How
18:00 – 19:30
Location: Room 302
Esther Cubo Delgado
Burgos, Spain
Meredith Spindler
Philadelphia, PA, USA
In this interactive session, experts interact with participants to share the breadth of telemedicine options for clinical care and the practical points to allow telemedicine implementation.
Recommended Audience: Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. List available and in-development telemedicine options for health care access and management of movement disorders
2. Define the “minimal standard” of needed equipment to set up telemedicine services for patients with movement disorders
3. Apply practical knowledge on implementing and customizing telemedicine skills for movement disorders management

3413 Skills Workshop [TICKET]
Honing the MDS-UPDRS to Deal With Real-Life Challenges
18:00 – 19:30
Location: Room 204
Mayela Rodriguez Violante
Mexico City, Mexico
Glenn Stebbins
Chicago, IL, USA
This interactive session brings scale experts together with the participants to share practical approaches to utilizing the MDS-UPDRS in both clinical practice and research.
Recommended Audience: Clinical Academicians, Non-Physician Health Professionals, Practitioners, Students/Residents/Trainees
At the conclusion of this session, participants should be better able to:
1. Apply arithmetic formulas to accommodate missing values in the MDS-UPDRS
2. Convert old UPDRS scores to MDS-UPDRS scores for continuity of longitudinal monitoring
3. Utilize the MDS-UPDRS in Parkinson’s disease patients with motor fluctuations
### Tuesday, June 6, 2017

**3414  Skills Workshop**

<table>
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<tr>
<th>Title</th>
<th>Details</th>
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</table>
| Colleague to Colleague: Recognizing and Managing Tardive Syndromes | 18:00 – 19:30  
Location: Room 109  
Tove Henriksen  
Copenhagen, Denmark  
Daniel Tarsy  
Boston, MA, USA  
In this interactive session, clinical experts engage participants to outline the wide breadth of tardive syndromes, their temporal development in relation to causative drug exposure, and practical approaches to diagnosis and treatment. |

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

At the conclusion of this session, participants should be better able to:
1. Recognize the wide phenotypic variability of tardive syndromes in adults and children
2. Describe the time-frame and natural history of different tardive syndromes
3. Utilize diagnostic tools and management options to treat tardive syndromes

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**3416  Skills Workshop**

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<th>Title</th>
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</table>
| Noninvasive Stimulation in Movement Disorders | 18:00 – 19:30  
Location: Room 207  
Robert Chen  
Toronto, ON, Canada  
Angelo Quatrarone  
Messina, Italy  
In this interactive session, faculty will provide a broad update about the current techniques of non-invasive brain stimulation used for research and clinical application, including mechanisms of action, limits and future perspectives. |

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

At the conclusion of this session, participants should be better able to:
1. Describe the different techniques of noninvasive brain stimulation
2. Describe the possible mechanisms of action of noninvasive brain stimulation
3. Identify the applications on noninvasive technique of brain stimulation in research and patient management

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**3518  Video Session**

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<th>Title</th>
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| Movement Disorders in Children | 18:00 – 19:30  
Location: Room 119  
Yoshiko Nomura  
Tokyo, Japan  
Toni Pearson  
St. Louis, MO, USA  
In this interactive session, faculty will show the clinical approach to recognition, investigation and treatment of movement disorders in children. |

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

At the conclusion of this session, participants should be better able to:
1. Recognize the specificity of pediatric movement disorders and their evolution in adulthood
2. Recognize the spectrum of metabolic and genetic movement disorders in children
3. Organize a clinical approach to the diagnosis of movement disorders in children

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**3415  Skills Workshop**

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<th>Title</th>
<th>Details</th>
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</table>
| Technology in Assessment of Parkinson’s Disease: How Does it Help? | 18:00 – 19:30  
Location: Room 211  
Jeffrey Hausdorff  
Tel Aviv, Israel  
Walter Maetzler  
Kiel, Germany  
In this interactive session, the use of technology for actual clinical and patient-centered assessment will be discussed in all its facets. Although intuitively technology-based measurement is considered to be objective, this session will heighten the awareness of the pitfalls and challenges for obtaining reliable data that are useful for the multidisciplinary team and most importantly for the patient himself. |

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

At the conclusion of this session, participants should be better able to:
1. Appraise recent evidence on reliability of technology designed to assess gait and balance problems
2. Identify the benefits and pitfalls of smartphone apps for patients’ self-assessment of diverse clinical outcomes
3. Determine the potential of technology-based assessment for multidisciplinary patient management

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**3517  Video Session**

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<th>Title</th>
<th>Details</th>
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</table>
| Eye Movement Characteristics in Movement Disorders | 18:00 – 19:30  
Location: Ballroom C  
Adolfo Bronstein  
London, United Kingdom  
Aasef Shaikh  
Cleveland, OH, USA  
In this interactive session, two experts will show the bedside examination of eye movements and how to recognize the oculomotor clues to common and not so common movement and ataxic disorders. |

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

At the conclusion of this session, participants should be better able to:
1. Identify the bedside oculomotor examination relevant to movement disorders
2. Identify typical eye movement abnormalities of fixation, saccades, pursuit, vergence and vestibular function
3. Recognize characteristic eye movement abnormalities across the common and uncommon hypokinetic, hyperkinetic and ataxic disorders
Wednesday, June 7, 2017

4101  Plenary Session

Development of Targeted Therapies for Parkinson’s Disease
8:00 – 9:30
Location: Ballroom A
Chairs: Dimitri Krainc
Chicago, IL, USA
Werner Poewe
Innsbruck, Austria
8:00 Novel Targeted Therapies for Parkinson’s Disease
Werner Poewe
Innsbruck, Austria
8:30 Development of Small Molecule Activators for GBA1
Dimitri Krainc
Chicago, IL, USA
9:00 Translating LRRK2 Biology into Novel Therapies
Mark Cookson
Bethesda, MD, USA

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

At the conclusion of this session, participants should be better able to:
1. Assess novel targeted therapeutic approaches for Parkinson’s disease
2. Recognize the potential of small molecules for the treatment of Parkinson’s disease
3. Clarify how Parkinson’s disease biology informs new treatment development

4102  Plenary Session, cont.

Caroline Sue
Sydney, NSW, Australia
Marie Vidailhet
Paris, France

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

At the conclusion of this session, participants should be better able to:
1. Identify how experts use clinical history and signs to formulate their diagnosis in complex movement disorder cases
2. Identify how experts use paraclinical methods to diagnose complex movement disorders
3. Identify how experts formulate therapies for complex movement disorder patients

Guided Poster Tours

Guided Poster Tour 9: Ataxia, Choreas
13:15 - 14:45
Guided Poster Tour 10: Imaging and Neurophysiology (Non-Parkinson’s Disease)
13:15 - 14:45
Guided Poster Tour 11: Cognition and Psychiatry
13:15 - 14:45
Guided Poster Tour 12: Clinical Phenomenology and Rating Scales
13:15 - 14:45
Location: Exhibit Hall C

Poster Session

Abstract Numbers: 774 - 1167
Location: Exhibit Hall C

Late-Breaking and Study Group Abstract Poster Sessions

13:15 - 14:45
Location: Ballroom D

4203  Parallel Session

From Genes to Functional Pathways in Parkinsonism
15:00 – 17:00
Location: Room 211
Chairs: Vincenzo Bonifati
Rotterdam, Netherlands
Andreas Poewe
Lund, Sweden
15:00 Dominantly Inherited Parkinsonism: What are the Common Pathways?
Andreas Poewe
Lund, Sweden
15:40 Linking Monogenic Parkinsonism to the Immune System
Matthew LaVoie
Boston, MA, USA
16:20 Retromer Dysfunction as a Common Pathway Underlying Parkinson’s Disease
Matthew Farrer
Vancouver, BC, Canada

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

At the conclusion of this session, participants should be better able to:
1. Discuss genetic features (mutations, penetrance, screening) of the dominant parkinsonisms, and their relevance for the etiologic landscape of Parkinson’s disease
2. Discuss recent findings linking the immune system and the pathogenesis of monogenic parkinsonism
3. Discuss the evidence supporting a role for retromer dysfunctions in the pathogenesis of Parkinson’s disease

4204  Parallel Session

Are all Neurodegenerative Diseases Prion Disorders?
15:00 – 17:00
Location: Room 302
Chairs: Glenda Halliday
Randwick, NSW, Australia
Yvonne Eisele
La Jolla, CA, USA
15:00 Synucleinopathies
Seung-Jae Lee
Seoul, Korea
15:40 Amyloidopathies
Yvonne Eisele
La Jolla, CA, USA
**Wednesday, June 7, 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
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<th>Authors/Experts</th>
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</thead>
<tbody>
<tr>
<td>15:00</td>
<td>Baalroom C: How do Fish Models Contribute to Understanding of Parkinson's Disease?</td>
<td>Room 221</td>
<td>K. Ray Chaudhuri, London, United Kingdom</td>
<td>Ryosuke Takahashi, Kyoto, Japan</td>
</tr>
<tr>
<td>15:40</td>
<td>Room 221: Modeling Non-Motor Symptoms of Parkinson’s Disease in Rodents</td>
<td>Room 221</td>
<td>Pablo Martinez-Martin, Madrid, Spain</td>
<td>Penelope Hallett, Belmont, MA, USA</td>
</tr>
<tr>
<td>16:20</td>
<td>Room 221: Primate Models of Parkinson’s Disease: From MPTP to Synucleinopathy</td>
<td>Room 221</td>
<td>Pablo Martinez-Martin, Madrid, Spain</td>
<td>Erwan Bezdard, Bordeaux, France</td>
</tr>
<tr>
<td>15:00</td>
<td>Room 207: Novel Ways of Grading Parkinson’s Disease Using Motor and Non-Motor Assessments: An Essential Clinical Paradigm</td>
<td>Room 207</td>
<td>K. Ray Chaudhuri, London, United Kingdom</td>
<td>Pablo Martinez-Martin, Madrid, Spain</td>
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<tr>
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<td>Room 207: Motor and Non-Motor Endophenotypes of Parkinson’s Disease: Controversies and Clinical Description</td>
<td>Room 207</td>
<td>Connie Marras, Toronto, ON, Canada</td>
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<tr>
<td>16:20</td>
<td>Room 207: Ethnicity and Its Impact on Parkinson’s Disease: A Global View With a Non-Motor Perspective</td>
<td>Room 207</td>
<td>Yoshio Tsuboi, Fukuoka, Japan</td>
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**4204 Parallel Session**

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<tbody>
<tr>
<td>16:20</td>
<td>Room 204: From Fish to Primates: Genetic and Mechanistic Animal Models for Parkinson’s Disease</td>
<td>Room 204</td>
<td>Stéphane Palfi, Cretel, France</td>
<td>Ryosuke Takahashi, Kyoto, Japan</td>
</tr>
<tr>
<td>16:20</td>
<td>Room 204: How to Treat Patients With Behavioral Disorders and Motor Symptoms</td>
<td>Room 204</td>
<td>Stéphane Palfi, Cretel, France</td>
<td>Louis Tan, Singapore</td>
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**4205 Parallel Session**

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<tbody>
<tr>
<td>15:00</td>
<td>Room 207: Basal Ganglia: Crossroads of Behavior and Motility</td>
<td>Room 207</td>
<td>Fumino Fujiyama, Kyoto, Japan</td>
<td>Mark Stacy, Durham, NC, USA</td>
</tr>
<tr>
<td>15:40</td>
<td>Room 207: Basal Ganglia Circuits for Motor and Behavioral, Emotional Performances</td>
<td>Room 207</td>
<td>Fumino Fujiyama, Kyoto, Japan</td>
<td>Mark Stacy, Durham, NC, USA</td>
</tr>
<tr>
<td>16:20</td>
<td>Room 207: Behavioral and Motor Symptoms in Parkinson’s Disease and Other Movement Disorders</td>
<td>Room 207</td>
<td>Kathy Dujardin, Lille, France</td>
<td>Kathy Dujardin, Lille, France</td>
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**4206 Parallel Session**

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<th>Authors/Experts</th>
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</thead>
<tbody>
<tr>
<td>15:00</td>
<td>Room 221: James Parkinson’s 200 Years: The Non-Motor Parkinson’s New Visions</td>
<td>Room 221</td>
<td>Pablo Martinez-Martin, Madrid, Spain</td>
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<tr>
<td>15:40</td>
<td>Room 221: Motor and Non-Motor Endophenotypes of Parkinson’s Disease: Controversies and Clinical Description</td>
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**4207 Parallel Session**

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<td>Stéphane Palfi, Cretel, France</td>
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</tr>
<tr>
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<td>Room 221</td>
<td>Stéphane Palfi, Cretel, France</td>
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**4208 Parallel Session**

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<tr>
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<th>Authors/Experts</th>
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<tr>
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<tr>
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<td>Room 221: Behavioral and Motor Symptoms in Parkinson’s Disease and Other Movement Disorders</td>
<td>Room 221</td>
<td>Kathy Dujardin, Lille, France</td>
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### Wednesday, June 7, 2017

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<thead>
<tr>
<th>4208</th>
<th>Parallel Session (Ticket), cont.</th>
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<tbody>
<tr>
<td><strong>At the conclusion of this session, participants should be better able to:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Explain the mechanisms or circuits of basal ganglia responsible for motor function and behavioral performance</td>
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<tr>
<td>2. Describe the clinical features of behavioral disorders in relation to motor symptoms</td>
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<tr>
<td>3. Explain how to manage the behavioral and motor symptoms in basal ganglia disorders</td>
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<table>
<thead>
<tr>
<th>4310</th>
<th>Teaching Course (Ticket), cont.</th>
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</thead>
<tbody>
<tr>
<td><strong>Diagnosis and Management of Atypical Parkinsonian Syndromes</strong></td>
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<tr>
<td><strong>15:00</strong> Progressive Supranuclear Palsy (PSP) and Corticobasal Degeneration (CBD)</td>
<td></td>
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<tr>
<td>Andrew Lees</td>
<td></td>
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<tr>
<td>London, United Kingdom</td>
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<tr>
<td><strong>15:40</strong> Multiple System Atrophy (MSA)</td>
<td></td>
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<tr>
<td>Johannes Levin</td>
<td></td>
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<tr>
<td>Munich, Germany</td>
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<tr>
<td><strong>16:20</strong> Dementia with Lewy Bodies (DLB)</td>
<td></td>
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<tr>
<td>Bradley Boeve</td>
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<tr>
<td>Rochester, MN, USA</td>
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</table>

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

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

1. Describe clinical features, diagnostic criteria, clinical investigations, and treatments of Progressive Supranuclear Palsy and Corticobasal Degeneration
2. Discuss clinical features, diagnostic criteria, clinical testing, and treatments of Multiple System Atrophy
3. Recognize clinical features, diagnostic criteria, clinical investigations, and treatments of Dementia with Lewy Bodies

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<thead>
<tr>
<th>4309</th>
<th>Teaching Course (Ticket)</th>
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<tbody>
<tr>
<td><strong>Uncommon Treatable Movement Disorders Not to Be Missed</strong></td>
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<tr>
<td><strong>15:00 – 17:00</strong></td>
<td></td>
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<tr>
<td><strong>Location:</strong> Room 109</td>
<td></td>
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<tr>
<td><strong>Chairs:</strong> Carlos Cosentino</td>
<td></td>
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<tr>
<td>Lima, Peru</td>
<td></td>
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<tr>
<td>Aurelie Meneret</td>
<td></td>
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<tr>
<td>Paris, France</td>
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<tr>
<td><strong>15:40</strong> Autoimmune Movement Disorders</td>
<td></td>
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<tr>
<td>Shekeeb Mohammad</td>
<td></td>
</tr>
<tr>
<td>Sydney, NSW, Australia</td>
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<tr>
<td><strong>16:20</strong> Metabolic Diseases Presenting with Movement Disorders in Adults</td>
<td></td>
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<tr>
<td>Aurelie Meneret</td>
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<tr>
<td>Paris, France</td>
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</table>

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

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

1. Improve recognition, diagnosis and treatment of toxic and infectious diseases causing movement disorders
2. Discuss the diagnosis and treatment of autoimmune movement disorders
3. Describe the diagnosis and treatment of metabolic diseases presenting with movement disorders in adulthood

<table>
<thead>
<tr>
<th>4411</th>
<th>Skills Workshop (Ticket)</th>
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<tbody>
<tr>
<td><strong>Novel Insights into Bladder and Sexual Dysfunction in Parkinson’s Disease</strong></td>
<td></td>
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<tr>
<td><strong>17:30 – 19:00</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Location:</strong> Room 119</td>
<td></td>
</tr>
<tr>
<td><strong>Gila Bronner</strong></td>
<td></td>
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<tr>
<td>Ramat-Gan, Israel</td>
<td></td>
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<tr>
<td><strong>Ryuji Sakakibara</strong></td>
<td></td>
</tr>
<tr>
<td>Sakara, Japan</td>
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**This interactive session will provide the latest update on our understanding of sexual and bladder dysfunction in Parkinson’s disease and discuss possible treatment and management approaches. It is aimed to facilitate an open discussion between the health professional and the patient in these areas of functioning and to appreciate the great impact of these problems on patients’ quality of life.**

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

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

1. Identify phenotype-genotype correlations and data gaps

<table>
<thead>
<tr>
<th>4412</th>
<th>Skills Workshop (Ticket)</th>
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<tbody>
<tr>
<td><strong>From Phenotype to Genotype and Back: The MDSGene Database</strong></td>
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<tr>
<td><strong>17:30 – 19:00</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Location:</strong> Room 204</td>
<td></td>
</tr>
<tr>
<td><strong>Kishore Kumar</strong></td>
<td></td>
</tr>
<tr>
<td>St. Leonards, NSW, Australia</td>
<td></td>
</tr>
<tr>
<td><strong>Joanne Trinh</strong></td>
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<tr>
<td>Vancouver, BC, Canada</td>
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</tbody>
</table>

**This interactive session is intended to provide the participant with an understanding of phenotype-genotype relations in hereditary movement disorders and provide practical and interactive training on the MDSGene database.**

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

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

1. Identify the limitations of current databases
2. Use the MDSGene
3. Recognize phenotype-genotype correlations and data gaps

<table>
<thead>
<tr>
<th>4413</th>
<th>Skills Workshop (Ticket)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How to Become a Successful Movement Disorder Specialist</strong></td>
<td></td>
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<tr>
<td><strong>17:30 – 19:00</strong></td>
<td></td>
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<tr>
<td><strong>Location:</strong> Room 109</td>
<td></td>
</tr>
<tr>
<td><strong>Stanley Fahn</strong></td>
<td></td>
</tr>
<tr>
<td>New York, NY, USA</td>
<td></td>
</tr>
<tr>
<td><strong>Claudia Tenkwalder</strong></td>
<td></td>
</tr>
<tr>
<td>Kassel, Germany</td>
<td></td>
</tr>
</tbody>
</table>

**This skills workshop will provide the participant the opportunity to meet and discuss how to successfully approach becoming a movement disorders specialist. The goals will include an interactive review of steps to take to pursue a career in movement disorders as well as how to become an effective leader.**

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

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

1. Develop a clear view of the steps needed to pursue specialization in movement disorders
2. Recognize the importance of searching for good mentors when pursuing specialization
3. Identify essential aspects of becoming an effective leader
Wednesday, June 7, 2017

**4516 Video Session [Ticket]**

**Minerals in the Brain**

**17:30 – 19:00**

**Location:** Room 207

Richard Myers  
Boston, MA, USA

Richard Wade-Martins  
Oxford, United Kingdom

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

1. Recognize clinical symptoms of patients with brain mineral (iron, calcium and manganese) deposition
2. Plan investigations and identify specific changes on brain CT/MRI for diagnostic purposes and for tracking disease progression and treatment effects
3. Describe the current status of management of the most common diseases associated with accumulation of minerals in the brain

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

**4517 Video Session [Ticket]**

**Movement Disorder Emergencies**

**17:30 – 19:00**

**Location:** Room 211

Roberto Ceravolo  
Pisa, Italy

Sun Ju Chung  
Seoul, Korea

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

1. Identify and manage Parkinson’s disease-related emergencies
2. Recognize common and uncommon hyperkinetic disorders, which may present at the emergency room
3. Manage emergencies related to Deep Brain Stimulation

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

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**4414 Skills Workshop [Ticket]**

**New Molecular Techniques That are Changing the Clinical Landscape**

**17:30 – 19:00**

**Location:** Room 221

Richard Myers  
Boston, MA, USA

Richard Wade-Martins  
Oxford, United Kingdom

**This interactive session is intended to provide the participant with a basic understanding of emerging state-of-the-art molecular tools that will play a crucial role in the upcoming years to biomarker discovery, identification of physiopathological pathways and development of novel therapeutic strategies in the field of Movement Disorders.**

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

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

1. Identify emerging experimental methodologies, including next-generation sequencing, novel gene-editing techniques and iPSC cell development
2. Identify potential applications of these techniques to the field of Movement Disorders
3. Interpret the results obtained by the use of these techniques in the context of movement disorders

---

**4518 Video Session [Ticket]**

**Recently Described Rare Disorders**

**17:30 – 19:00**

**Location:** Ballroom C

Victor Fung  
Sydney, NSW, Australia

Dan Healy  
Dublin, Ireland

**In recent years, many entirely new movement disorders have been described. Further, novel manifestations of previously described disorders have been discovered. This interactive session is intended to provide a survey of some of the most recently described disorders, some of which are treatable.**

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

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

1. Recognize newly described hyperkinetic disorders
2. Recognize newly described hypokinetic disorders
3. Describe the diagnostic and therapeutic strategies for newly described disorders
Thursday, June 8, 2017

5101 Plenary Session

Challenges in Clinicogenetic Correlations: One Gene - Many Phenotypes; One Phenotype - Many Genes

8:00 – 9:30

Location: Ballroom A
 Chairs: Kailash Bhatai, London, United Kingdom
 Victor Fung, Sydney, NSW, Australia

8:00 One Gene – Many Phenotypes
 Kailash Bhatai, London, United Kingdom

8:30 One Phenotype – Many Genes
 Vincenzo Bonifati, Rotterdam, Netherlands

9:00 Clinical Implications – Diagnosis and Treatment
 Hyder Jinnah, Atlanta, GA, USA

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

At the conclusion of this session, participants should be better able to:
1. Recognize the sometimes different and complex phenotypes of monogenic mutations
2. Recognize similar clinical phenotypes resulting from different genetic mutations
3. Discuss the complexity of the evolving role of genetics in movement disorders

5104 Parallel Session

Hereditary Spastic Paraplegias: An Expanding and Challenging Field

15:00 – 17:00

Location: Room 204
 Chairs: Giovanni Stevanin, Paris, France
 Carolyn Sue, Sydney, NSW, Australia

15:00 Autosomal Dominant Forms
 Toshitaka Kawarai, Tokushima, Japan

16:00 Autosomal Recessive and X-Linked Forms
 Giovanni Stevanin, Paris, France

16:20 Pathogenic Pathways and Therapeutic Insights
 John Fink, Ann Arbor, MI, USA

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

At the conclusion of this session, participants should be better able to:
1. Review recent developments in the basic science field of Movement Disorders
2. Discuss an overview of recent clinical developments
3. Define an overall perspective on current topics of interest in Movement Disorders

Blue Ribbon Highlights

11:00 – 12:00

Location: Ballroom A
 Chairs: David John Burn, Newcastle upon Tyne, United Kingdom
 Claudia Trenkwalder, Kassel, Germany

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

At the conclusion of this session, participants should be better able to:
1. Recognize the immunization therapies proposed for proteinopathies
2. Identify the mechanisms for immunization therapies in proteinopathies
3. Determine whether immunization therapy for proteinopathies is expected to be effective as a disease-modifying treatment

5102 Plenary Session, cont.

10:45 ICD and Parkinson’s Disease: Drug or Disease? (Disease)
 Thomas Münte, Lübeck, Germany

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

At the conclusion of this session, participants should be better able to:
Topic 1:
1. Recognize the immunization therapies proposed for proteinopathies
2. Identify the mechanisms for immunization therapies in proteinopathies
3. Determine whether immunization therapy for proteinopathies is expected to be effective as a disease-modifying treatment

Topic 2:
1. Recognize the spectrum of ICDs that occur in Parkinson’s disease
2. Identify the frequency of ICDs in Parkinson’s disease before and after treatment
3. Discuss whether ICDs in Parkinson’s disease are more likely due to the disease or the treatment

5103 Plenary Session

Blue Ribbon Highlights

11:00 – 12:00

Location: Ballroom A
 Chairs: David John Burn, Newcastle upon Tyne, United Kingdom
 Claudia Trenkwalder, Kassel, Germany

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

At the conclusion of this session, participants should be better able to:
1. Review recent developments in the basic science field of Movement Disorders
2. Discuss an overview of recent clinical developments
3. Define an overall perspective on current topics of interest in Movement Disorders

Guided Poster Tours

Guided Poster Tour 13:
Dystonia, Hyperkinetic Movement Disorders and Other
13:15 - 14:45

Guided Poster Tour 14:
Parkinson’s Disease: Pharmacology
13:15 - 14:45

Guided Poster Tour 15:
Parkinson’s Disease: Neuroimaging
13:15 - 14:45

Guided Poster Tour 16:
Clinical Trials
13:15 - 14:45

Location: Exhibit Hall C

Poster Session

13:15 - 14:45

Abstract Numbers: 1168 - 1576

Location: Exhibit Hall C

Guided Poster Tours

Guided Poster Tour 13:
Dystonia, Hyperkinetic Movement Disorders and Other
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Guided Poster Tour 14:
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13:15 - 14:45

Guided Poster Tour 15:
Parkinson’s Disease: Neuroimaging
13:15 - 14:45

Guided Poster Tour 16:
Clinical Trials
13:15 - 14:45

Location: Exhibit Hall C

Blue Ribbon Highlights

11:00 – 12:00

Location: Ballroom A
 Chairs: David John Burn, Newcastle upon Tyne, United Kingdom
 Claudia Trenkwalder, Kassel, Germany

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

At the conclusion of this session, participants should be better able to:
1. Recognize the immunization therapies proposed for proteinopathies
2. Identify the mechanisms for immunization therapies in proteinopathies
3. Determine whether immunization therapy for proteinopathies is expected to be effective as a disease-modifying treatment

Guided Poster Tours

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Guided Poster Tour 15:
Parkinson’s Disease: Neuroimaging
13:15 - 14:45

Guided Poster Tour 16:
Clinical Trials
13:15 - 14:45

Location: Exhibit Hall C
At the conclusion of this session, participants should be better able to:
1. Describe genotypes and phenotypes of dominant forms of hereditary spastic paraplegias
2. Describe genotypes and phenotypes of recessive and X-linked forms of hereditary spastic paraplegias
3. Discuss emerging pathogenic pathways and implications for the development of rational therapies

**Clinical Role of Neuropathology**

**Location:** Room 221

**Chairs:**
- Ian MacKenzie, Vancouver, BC, Canada
- Eng-King Tan, Singapore

**At the conclusion of this session, participants should be better able to:**
1. Identify clinical, imaging and laboratory clues to the differential diagnosis of Corticobasal Degeneration
2. Identify clinical, imaging and laboratory clues to the differential diagnosis of Progressive Supranuclear Palsy
3. Identify clinical, imaging and laboratory clues to the differential diagnosis of Multiple System Atrophy

**Complementary and Alternative Medicine in Movement Disorders**

**Location:** Room 302

**Chairs:** Beomseok Jeon, Seoul, Korea

**At the conclusion of this session, participants should be better able to:**
1. Recognize the breadth of complementary and alternative treatment options and their evidence base in managing movement disorders
2. Incorporate considerations of placebo influences in the treatment of movement disorders
3. Formulate strategies for integrating complementary and alternative treatments with an evidence base into the comprehensive management of movement disorder patients
Thursday, June 8, 2017

**5209 Parallel Session**

16:20 Clinical and Experimental Therapies in Ataxias
Stefan Pulst
Salt Lake City, UT, USA

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

At the conclusion of this session, participants should be better able to:
1. Identify the etiologies and classifications of ataxias
2. Recognize the challenges and limitations of genetic testing in ataxias
3. Identify the clinical and experimental therapies in ataxias

**5310 Teaching Course**

Classification and Management of Tremor
15:00 – 17:00

Location: Room 119
Chairs: Günther Deuschl
Kiel, Germany
Yoshikazu Ugawa
Fukushima, Japan

15:00 Evolving Classification of Tremor with Updates on New Tremor Entities
Günther Deuschl
Kiel, Germany

15:40 Clinical Examination of Tremor
Alexander Rajput
Saskatoon, SK, Canada

16:20 Current Treatment Options for Tremor
Matej Skorvanek
Kosice, Slovakia

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

At the conclusion of this session, participants should be better able to:
1. Recognize the current definition and classification of tremor and recognize new tremor entities, for example dystonic tremor and the ‘current’ concept of essential tremor
2. Identify different examination techniques in patients with tremor that will lead to a structured clinical approach
3. Discuss different therapeutic options for tremor including pharmacologic and surgical treatments

**5311 Teaching Course**

Management of Advanced Parkinson’s Disease
15:00 – 17:00

Location: Room 109
Chairs: Nir Giladi
Tel Aviv, Israel
Lars Timmermann
Cologne, Germany

15:00 Pharmacological Strategies for Managing Motor Complications
Angelo Antonini
Venice, Italy

15:40 Surgery and Other Invasive Therapies for Managing Motor Complications
Thomas Kimber
Adelaide, SA, Australia

16:20 Management of Levodopa-Unresponsive Symptoms
Nir Giladi
Tel Aviv, Israel

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

At the conclusion of this session, participants should be better able to:
1. Describe the different oral medications and pharmacologic strategies that can be used to manage dyskinesias and motor fluctuations in advanced Parkinson’s disease
2. Recognize which patients with advanced Parkinson’s disease need more invasive therapies, such as: Deep Brain Stimulation, continuous subcutaneous apomorphine and levodopa intestinal gel, including an assessment of the risks and benefits of each therapy for individual patients
3. Discuss the treatment options for disabling levodopa-unresponsive symptoms in the advanced Parkinson’s disease patient, including dysautonomia, dysphagia, dysarthria, and falls

See International Congress mobile app for full faculty listing
Brief Summary: Prior to using these devices, please review the Clinician’s manual for a complete listing of indications, contraindications, warnings, precautions, potential adverse events, and directions for use. The system is intended to be used with leads and associated extensions that are compatible with the system.

Indications for Use: US: Bilateral stimulation of the subthalamic nucleus (STN) as an adjunctive therapy to reduce some of the symptoms of advanced levodopa-responsive Parkinson’s disease that are not adequately controlled by medications, unilateral or bilateral stimulation of the ventral intermediate nucleus (VIM) of the thalamus for the management of tremor, and unilateral or bilateral stimulation of the subthalamic nucleus (STN) in patients with levodopa-responsive Parkinson’s disease. International: Bilateral stimulation of the thalamus, internal globus pallidus (GPi), or subthalamic nucleus (STN) in patients with levodopa-responsive Parkinson’s disease, unilateral or bilateral stimulation of the ventral intermediate nucleus (VIM) of the thalamus for the management of tremor, and unilateral or bilateral stimulation of the internal globus pallidus (GPi) or the subthalamic nucleus (STN) for the management of intractable, chronic dystonia, including primary and secondary dystonia.

Contraindications: In the United States (US): Patients who are unable to operate the system or for whom test stimulation is unsuccessful. Diathermy, electroshock therapy, and transcranial magnetic stimulation (TMS) are contraindicated for patients with a deep brain stimulation system. International: Patients who are unable to operate the system or for whom test stimulation is unsuccessful. Diathermy and magnetic resonance imaging are contraindicated for patients with a deep brain stimulation system.

Warnings/Precautions: Return of symptoms due to abrupt cessation of stimulation (rebound effect), excessive or low frequency stimulation, risk of depression and suicide, implanted cardiac systems or other active implantable devices, magnetic resonance imaging (MRI), electromagnetic interference (EMI), proximity to electrosurgery devices and high-output ultrasounds and lithotripsy, ultrasonic scanning equipment, external defibrillators, and therapeutic radiation, therapeutic magnets, radiofrequency sources, explosive or flammable gases, theft detectors and metal screening devices, activities requiring excessive twisting or stretching, operation of machinery and equipment, pregnancy, and case damage. Patients who are poor surgical risks, with multiple illnesses, or with active general infections should not be implanted. Adverse Effects: Loss of therapeutic benefit or decreased therapeutic response, painful stimulation, persistent pain around the implanted parts (e.g., along the extension path in the neck), worsening of motor impairment, parkinsonism, dystonia, sensory disturbance or impairment, speech or language impairment, and cognitive impairment. Surgical risks include intracranial hemorrhage, stroke, paralysis, and death. Other complications may include seizures and infection. Clinician’s manual must be reviewed for detailed disclosure. Device depicted may not be available for all displayed indications in all countries. Check with your St. Jude Medical representative for product availability in your country.

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Corporate Therapeutic Symposia

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

**Sunday, June 4, 2017**

<table>
<thead>
<tr>
<th>Company</th>
<th>Topic</th>
<th>Time</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>Teva</td>
<td>Addressing Unmet Needs in Hyperkinetic Movement Disorders</td>
<td>13:15-14:15</td>
<td>Room 119</td>
</tr>
<tr>
<td>Sunovion</td>
<td>Off States in Parkinson's Disease: Options Beyond Oral Medications</td>
<td>13:15-14:15</td>
<td>Room 211</td>
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</tbody>
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**Monday, June 5, 2017**

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<thead>
<tr>
<th>Company</th>
<th>Topic</th>
<th>Time</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>Britannia</td>
<td>A Landmark Year for Apomorphine: Advancing PD Management with New Clinical Evidence</td>
<td>12:45-13:45</td>
<td>Room 211</td>
</tr>
<tr>
<td>Neurocrine</td>
<td>New Treatment for Tardive Dyskinesia: A Case Based Approach</td>
<td>12:45-13:45</td>
<td>Room 221</td>
</tr>
</tbody>
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- Immediate improvement in tremor post procedure
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FDA labeling: The Exablate Neuro is intended for use in the unilateral Thalamotomy treatment of idiopathic Essential Tremor patients with medication-refractory tremor. Patients must be at least age 22.
## Corporate Therapeutic Symposia

### Tuesday, June 6, 2017

<table>
<thead>
<tr>
<th>Company</th>
<th>Topic</th>
<th>Time</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>Acorda</td>
<td>Off Periods: Are We Assessing What Matters</td>
<td>12:45-13:45</td>
<td>Room 221</td>
</tr>
<tr>
<td>Zambon</td>
<td>Safinamide as Add-On Therapy: Moving Beyond Dopamine for a Multifaceted Approach in Parkinson's Disease</td>
<td>12:45-13:45</td>
<td>Room 119</td>
</tr>
<tr>
<td>Teva</td>
<td>Update on the Management of Huntington's Disease Chorea</td>
<td>12:45-13:45</td>
<td>Room 211</td>
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### Wednesday, June 7, 2017

<table>
<thead>
<tr>
<th>Company</th>
<th>Topic</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>AbbVie</td>
<td>The Tipping Point in Advanced Parkinson's Disease: How to Maintain Patient's Quality of Life</td>
<td>12:15-13:15</td>
<td>Room 211</td>
</tr>
<tr>
<td>Lundbeck</td>
<td>Doctor, I’m Dizzy: Clinical and Patient Perspectives of Neurogenic Orthostatic Hypotension</td>
<td>12:15-13:15</td>
<td>Room 119</td>
</tr>
</tbody>
</table>

### Young Delegates Reception

**Tuesday, June 6**

Sponsored by Lundbeck

19:30 – 21:00

Location: Room 223

See International Congress mobile app for more information.
Off States in Parkinson’s Disease: Options Beyond Oral Medications

Sunday, June 4, 2017
13:15 – 14:15
Lunch to be provided - optional

Vancouver Convention Centre – West
Room 211

Symposium Schedule:
• Understanding and appreciating the OFF spectrum in Parkinson’s Disease (Kelvin Chou, MD)
• Challenges of current oral ‘first-pass’ therapies for OFF states in Parkinson’s Disease (Janis Miyasaki, MD, MEd, FRCPC, FAAN)
• Treatment options and approaches for OFF states in Parkinson’s Disease (Fabrizio Stocchi, MD, PhD)
• Panel Discussion (Fabrizio Stocchi, MD, PhD; Kelvin Chou, MD; Janis Miyasaki, MD)
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1990
Blepharospasm and Strabismus

1995
Cervical dystonia (spasmodic torticollis)

1999
Pediatric dynamic equinus foot deformity

2001
Focal Spasticity

2011
Chronic migraine
Bladder dysfunction: due to neurogenic detrusor overactivity

2013
Bladder dysfunction: overactive bladder
Exhibit and Poster Hall Floor Plan

See International Congress mobile app for full exhibitor listing.
The new reusable D-mine® Pen injector for Dacepton® 10 mg/ml in 3 ml cartridges. This high quality Pen is developed for intermittent bolus injections with Dacepton® in Parkinson’s Disease. The automatic delivery-system enables low and constant injection force for PD patients with motoric impairment. Possible dose correction and last dose stop guarantee safe comfort with an in-use stability of 15 days. The D-mine® Pen injection may deliver a controlled “on” period for patients and has therefore a positive impact on daily activities!
Education Grant Supporters

MDS acknowledges the supporters of the following 21st International Congress activities through unrestricted educational grants:

**Therapeutic Plenary Session 1101**
Treating Motor Complications of Parkinson’s Disease, Supported by Adamas Pharmaceuticals

**Therapeutic Plenary Session 1102**
Treatment of Dystonia, Supported by Boston Scientific, Ipsen & Merz North America

**Therapeutic Plenary Session 1104**
Update on Neurosurgical Interventions for Movement Disorders, Supported by Boston Scientific

**Teaching Course 2310**
Practical Management of Common Non-Motor Symptoms in Parkinson’s Disease, Supported by ACADIA Pharmaceuticals & Lundbeck

**Skills Workshop 2412**
Which Targeting Technique for Botulinum Toxin Injections? Supported by Allergan, Ipsen & Merz North America

**Skills Workshop 2413**
Post-Surgical Management of Deep Brain Stimulation Therapies, Supported by Boston Scientific

**Plenary Session 3102**
Huntington’s Disease Molecular and Therapeutic Advances, Supported by Lundbeck

**Parallel Session 3205**
Breaking News in Movement Disorders, Supported by Impax

**Teaching Course 3310**
Classification, Pathogenesis, and Management of Dystonia, Supported by Ipsen & Merz North America

**Plenary Session 5102**
Controversies in Movement Disorders, Supported by Impax

**Teaching Course 5311**
Management of Advanced Parkinson’s Disease, Supported by EverNeuro Pharma

The overall education program has been supported by unrestricted medical education grants from Abbott and Pfizer, Inc.
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Come see us in Vancouver, British Columbia, Canada on June 4-8 at the Impax Laboratories Booth.

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Acknowledgements

The International Congress Oversight Committee of the 21st International Congress of Parkinson’s Disease and Movement Disorders wishes to acknowledge and thank the following companies for their support:

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- Adamas
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Above companies are confirmed as of April 30, 2017
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VANCOUVER, CANADA
June 4 - 8, 2017

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*Medtronic DBS systems are MR Conditional and safe in the MR environment as long as certain conditions are met. If the conditions are not met, a significant risk is tissue lesions from component heating, especially at the lead electrodes, resulting in serious and permanent injury including coma, paralysis, or death. Refer to the MRI Guidelines for Medtronic Deep Brain Stimulation Systems for a complete list of conditions. Information on file. Medtronic Expanded MRI for DBS Therapy – Messaging Platform, October 25, 2016.
THE IMPACT OF TARDIVE DYSKINESIA (TD) IS IN THE EYE OF THE BEHOLDER. IT'S TIME TO SEE WHAT THEY SEE.

IT'S TIME TO VISIT BOOTH 207
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In vitro, NUPLAZID targets 5-HT\(_{2A}\) and 5-HT\(_{2C}\) receptors while demonstrating no appreciable binding affinity for dopamine, histamine, muscarinic, or adrenergic receptors. With a proven safety profile and no impact on motor function, once-daily NUPLAZID 34 mg can be prescribed with confidence.\(^1\)

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**Important Safety Information for NUPLAZID (pimavanserin) 17-mg Tablets**

**WARNING: INCREASED MORTALITY IN ELDERLY PATIENTS WITH DEMENTIA-RELATED PSYCHOSIS**

Elderly patients with dementia-related psychosis treated with antipsychotic drugs are at an increased risk of death. NUPLAZID is not approved for the treatment of patients with dementia-related psychosis unrelated to the hallucinations and delusions associated with Parkinson’s disease psychosis.

**QT Interval Prolongation:** NUPLAZID prolongs the QT interval. The use of NUPLAZID should be avoided in patients with known QT prolongation or in combination with other drugs known to prolong QT interval including Class 1A antiarrhythmics or Class 3 antiarrhythmics, certain antipsychotic medications, and certain antibiotics. NUPLAZID should also be avoided in patients with a history of cardiac arrhythmias, as well as other circumstances that may increase the risk of the occurrence of torsade de pointes and/or sudden death, including symptomatic bradycardia, hypokalemia or hypomagnesemia, and presence of congenital prolongation of the QT interval.

**Adverse Reactions:** The most common adverse reactions (≥2% for NUPLAZID and greater than placebo) were peripheral edema (7% vs 2%), nausea (7% vs 4%), confusional state (6% vs 3%), hallucination (5% vs 3%), constipation (4% vs 3%), and gait disturbance (2% vs <1%).

**Drug Interactions:** Strong CYP3A4 inhibitors (e.g., ketoconazole) increase NUPLAZID concentrations. Reduce the NUPLAZID dose by one-half.
Strong CYP3A4 inducers may reduce NUPLAZID exposure, monitor for reduced efficacy. Increase in NUPLAZID dosage may be needed.

**Renal Impairment:** No dosage adjustment for NUPLAZID is needed in patients with mild to moderate renal impairment. Use of NUPLAZID is not recommended in patients with severe renal impairment.

**Hepatic Impairment:** Use of NUPLAZID is not recommended in patients with hepatic impairment. NUPLAZID has not been evaluated in this patient population.

**Pregnancy:** Use of NUPLAZID in pregnant women has not been evaluated and should therefore be used in pregnancy only if the potential benefit justifies the potential risk to the mother and fetus.

**Pediatric Use:** Safety and efficacy have not been established in pediatric patients.

**Dosage and Administration**
Recommended dose: 34 mg per day, taken orally as two 17-mg tablets once daily, without titration.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088. You can also call ACADIA Pharmaceuticals Inc. at 1-844-4ACADIA (1-844-422-2342).

NUPLAZID (pimavanserin) is not available for sale in Canada.

See Brief Summary of Prescribing Information on adjacent pages.
NUPLAZID™ (pimavanserin) tablets, for oral use.
Rx only

Brief Summary: This information is not comprehensive. Visit www.NUPLAZID.com to obtain the FDA-approved product labeling or call 1-844-422-2342.

WARNING: INCREASED MORTALITY IN ELDERLY PATIENTS WITH DEMENTIA-RELATED PSYCHOSIS
Elderly patients with dementia-related psychosis treated with antipsychotic drugs are at an increased risk of death. NUPLAZID is not approved for the treatment of patients with dementia-related psychosis unrelated to the hallucinations and delusions associated with Parkinson's disease psychosis.

1 INDICATIONS AND USAGE
NUPLAZID™ is an atypical antipsychotic indicated for the treatment of hallucinations and delusions associated with Parkinson's disease psychosis.

2 DOSAGE AND ADMINISTRATION
The recommended dose of NUPLAZID is 34 mg, taken orally as two 17-mg strength tablets once daily, without titration.

- Coadministration with Strong CYP3A4 Inhibitors
  The recommended dose of NUPLAZID when coadministered with strong CYP3A4 inhibitors (e.g., ketoconazole) is 17 mg, taken orally as one tablet once daily.

- Coadministration with Strong CYP3A4 Inducers
  Monitor patients for reduced efficacy if NUPLAZID is used concomitantly with strong CYP3A4 inducers; an increase in NUPLAZID dosage may be needed.

4 CONTRAINDICATIONS
None.

5 WARNINGS AND PRECAUTIONS
Increased Mortality in Elderly Patients with Dementia-Related Psychosis
Antipsychotic drugs increase the all-cause risk of death in elderly patients with dementia-related psychosis. Analyses of 17 dementia-related psychosis placebo-controlled trials (modal duration of 10 weeks and largely in patients taking atypical antipsychotic drugs) revealed a risk of death in the drug-treated patients of between 1.6- to 1.7-times that in placebo-treated patients. Although the causes of death were varied, most of the deaths appeared to be either cardiovascular (e.g., heart failure, sudden death) or infectious (e.g., pneumonia) in nature. NUPLAZID is not approved for the treatment of patients with dementia related psychosis unrelated to the hallucinations and delusions associated with Parkinson's disease psychosis.

QT Interval Prolongation
NUPLAZID prolongs the QT interval. The use of NUPLAZID should be avoided in patients with known QT prolongation or in combination with other drugs known to prolong QT interval including Class 1A antiarrhythmics (e.g., quinidine, procainamide) or Class 3 antiarrhythmics (e.g., amiodarone, sotalol), certain antipsychotic medications (e.g., ziprasidone, chlorpromazine, thioridazine), and certain antibiotics (e.g., gatifloxacin, moxifloxacin). NUPLAZID should also be avoided in patients with a history of cardiac arrhythmias, as well as other circumstances that may increase the risk of the occurrence of torsade de pointes and/or sudden death, including symptomatic bradycardia, hypokalemia or hypomagnesemia, and the presence of congenital prolongation of the QT interval.

6 ADVERSE REACTIONS
The following serious adverse reactions are discussed elsewhere in the labeling:
- Increased Mortality in Elderly Patients with Dementia-Related Psychosis
- QT Interval Prolongation

Clinical Trial Experience
The clinical trial database for NUPLAZID consists of over 1200 subjects and patients exposed to one or more doses of NUPLAZID.

Adverse reactions that occurred in 6-week, placebo-controlled studies and that were reported at an incidence of ≥2%, and >placebo are presented in the following table.

<table>
<thead>
<tr>
<th>Preferred Term</th>
<th>NUPLAZID 34 mg</th>
<th>Placebo</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 202</td>
<td>N = 231</td>
<td></td>
</tr>
<tr>
<td>Nausea</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Peripheral edema</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>Confusional state</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>Hallucination</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Constipation</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Gait disturbance</td>
<td>2%</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

*Hallucination includes visual, auditory, tactile, and somatic hallucinations

7 DRUG INTERACTIONS
QT Interval Prolongation
Concomitant use of drugs that prolong the QT interval may add to the QT effects of NUPLAZID and increase the risk of cardiac arrhythmia. Avoid the use of NUPLAZID in combination with other drugs known to prolong QT interval.

Strong CYP3A4 Inhibitors
Concomitant use of NUPLAZID with a strong CYP3A4 inhibitor increases pimavanserin exposure. If NUPLAZID is used with a strong CYP3A4 inhibitor, reduce the dosage of NUPLAZID.

Strong CYP3A4 Inducers
Concomitant use of a strong CYP3A4 inducer may reduce pimavanserin exposure resulting in a potential decrease in efficacy. Patients should be monitored for reduced efficacy and an increase in dosage may be needed if NUPLAZID is used concomitantly with strong CYP3A4 inducers.

8 USE IN SPECIFIC POPULATIONS
Pregnancy: There are no data on NUPLAZID use in pregnant women that would allow assessment of the drug-associated risk of major congenital malformations or miscarriage. In animal reproduction studies, no adverse developmental effects were seen when pimavanserin was administered orally to rats or rabbits during the period of organogenesis at doses up to 10- or 12-times the maximum recommended human dose (MRHD) of 34 mg/day, respectively. Administration of pimavanserin to pregnant rats during pregnancy and lactation resulted in maternal toxicity and lower pup survival and body weight at doses which are 2-times the MRHD of 34 mg/day.
Lactation: There is no information regarding the presence of pimavanserin in human milk, the effects on the breastfed infant, or the effects on milk production. The developmental and health benefits of breastfeeding should be considered along with the mother’s clinical need for NUPLAZID and any potential adverse effects on the breastfed infant from NUPLAZID or from the underlying maternal condition.

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

Geriatric Use
No dose adjustment is required for elderly patients. Parkinson’s disease is a disorder occurring primarily in individuals over 55 years of age. The mean age of patients enrolled in the 6-week clinical studies with NUPLAZID was 71 years, with 49% 65-75 years old and 31% >75 years old. In the pooled population of patients enrolled in 6-week, placebo-controlled studies (N=614), 27% had MMSE scores from 21 to 24 compared to 73% with scores ≥25. No clinically meaningful differences in safety or effectiveness were noted between these two groups.

Renal Impairment
No dosage adjustment for NUPLAZID is needed in patients with mild to moderate (CrCL ≥30 mL/min, Cockcroft-Gault) renal impairment. Use of NUPLAZID is not recommended in patients with severe renal impairment (CrCL <30 mL/min, Cockcroft-Gault). NUPLAZID has not been evaluated in this patient population.

Hepatic Impairment
Use of NUPLAZID is not recommended in patients with hepatic impairment. NUPLAZID has not been evaluated in this patient population.

9 DRUG ABUSE AND DEPENDENCE
Controlled Substance
NUPLAZID is not a controlled substance.

Abuse
NUPLAZID has not been systematically studied in humans for its potential for abuse, tolerance, or physical dependence. While short-term, placebo-controlled and long-term, open-label clinical trials did not reveal increases in drug-seeking behavior, the limited experience from the clinical trials do not predict the extent to which a CNS-active drug will be misused, diverted, and/or abused once marketed.

10 OVERDOSAGE
Human Experience
The pre-marketing clinical trials involving NUPLAZID in approximately 1200 subjects and patients do not provide information regarding symptoms with overdose. In healthy subject studies, dose limiting nausea and vomiting were observed.

Management of Overdose
There are no known specific antidotes for NUPLAZID. In managing overdose, cardiovascular monitoring should commence immediately and should include continuous ECG monitoring to detect possible arrhythmias. If antiarrhythmic therapy is administered, disopyramide, procainamide, and quinidine should not be used, as they have the potential for QT-prolonging effects that might be additive to those of NUPLAZID. Consider the long plasma half-life of pimavanserin (about 57 hours) and the possibility of multiple drug involvement.

17 PATIENT COUNSELING INFORMATION
Concomitant Medication
Advise patients to inform their healthcare providers if there are any changes to their current prescription or over-the-counter medications, since there is a potential for drug interactions.

CAUTION: Federal law prohibits dispensing without prescription.
NUPLAZID™ is a trademark of ACADIA Pharmaceuticals Inc.
Distributed by: ACADIA Pharmaceuticals Inc. San Diego, CA 92130 NU-0381 09/16.
OFF PERIODS: ARE WE ASSESSING WHAT MATTERS?

JOIN A DISTINGUISHED PANEL led by

MATTHEW STERN, MD
Philadelphia, PA, USA

with

RAJESH PAHWA, MD
Kansas City, KS, USA

CONNIE MARRAS, MD, PhD
Toronto, ON, Canada

C WARREN OLANOW, MD, FRCP(C), FRCP(hon)
New York, NY, USA

Tuesday, June 6, 2017 • 12:45PM–1:45PM
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PRESCRIBING INFORMATION Ongentsy® Opicapone

Please refer to the SPC before prescribing. Ongentsy 50 mg hard capsules. Indication: Ongentsy is indicated as adjunctive therapy to preparations of levodopa/ DOPA decarboxylase inhibitors (DDI) in adult patients with Parkinson’s disease and end-of-dose motor fluctuations who cannot be stabilised on those combinations. Posology and method of administration: The recommended dose of opicapone is 50 mg. Ongentsy should be taken once daily at bedtime at least one hour before or after levodopa combinations. Dose adjustments of opiparniphrine therapy: Ongentsy enhances the effects of levodopa. Hence, it is often necessary to adjust levodopa dosage within the first day or first weeks after initiating the treatment with opicapone. Missed dose: If one dose is missed, the next dose should be taken as soon as remembered. The patient should not take an extra dose to make up for the missed dose. Elderly: No dose adjustment is needed for elderly patients. Caution must be exercised in patients 85 years of age or above as there is limited experience in this age group. Renal impairment: No dose adjustment is necessary in patients with mild renal impairment as opicapone is not excreted by the kidney. Hepatic Impairment: No dose adjustment is necessary in patients with mild hepatic impairment (Child Pugh Class A). There is limited clinical experience in patients with moderate hepatic impairment (Child Pugh Class B). Caution must be exercised in these patients and dose adjustment may be necessary. There is no clinical experience in patients with severe hepatic impairment (Child Pugh Class C), therefore, Ongentsy is not recommended in these patients. Paediatric population: There is no relevant use of Ongentsy in the paediatric population with Parkinson’s disease. Special warnings and precautions for use: Dose adjustments of anti-parkinsonian therapy: Ongentsy is to be administered in conjunction with levodopa and other anti-parkinsonian medications. Hence, the patient should be monitored regularly for the development of impulse control disorders and review of treatment is recommended if such symptoms develop. Other increases in liver enzymes were reported in studies with non-tetrahydrobiopterin catalytic O-methyltransferase (COMT). For patients who experience serious side effects, dementia, and weight decrease within a relatively short period of time, a general medical evaluation including liver function should be considered. Intoxication to exponents: Ongentsy contains lactose. Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take Ongentsy.

Interaction with other medicinal products and other forms of interaction: Monoamine oxidase (MAO) inhibitors: Combination of opicapone and MAO inhibitors could result in inhibition of the maquility of the pathways responsible for the metabolism of catecholamines. Because of this, concurrent use of opicapone with MAO inhibitors for the treatment of Parkinson’s disease, e.g. rasagiline (up to 1 mg/day) and selegiline (up to 10 mg/day in oral formulation or 1.25 mg/day in buccal formulation), is permitted. There is no experience with opicapone when used concomitantly with the MAO-B inhibitor safinamide. Therefore, their concomitant use should be considered with appropriate caution. Medicinal products metabolised by COMT: Opicapone may interfere with the metabolism of medicinal products containing a catechol group that are metabolised by COMT, e.g. irinotecan, isoprenaline, adrenaline, noradrenaline, dopamine, desipramine, or dobutamine, leading to potentiated effects of these medicinal products. Careful monitoring of patients being treated with these medicinal products is advised when opicapone is used. Tripticylic antidepressants and noradrenaline-re-uptake inhibitors: There is limited experience with opicapone when used concomitantly with tricyclic antidepressants and noradrenaline re-uptake inhibitors (e.g. venlafaxine, maprotiline and desipramine). Thus, their concomitant use should be considered with appropriate caution. Rasagiline: Opicapone is a weak inhibitor of CYP2C9. A study in healthy subjects using a dose of 25 mg, and a less than optimal dosing regimen, showed an average increase of 30% in the rate, but not the extent, of exposure to ropinirole when co-administered (i.e. given at the same time) with opicapone most likely caused by an inhibition of CYP2C9. Thus, particular consideration should be given to medical products metabolised by CYP2C9 and their co-administration should be avoided. OATP1B1 substrates: Opicapone is a weak inhibitor of OATP1B1. There is no experience with opicapone when used concomitantly with OATP1B1 substrates. Thus, particular consideration should be given to medicinal products transported by OATP1B1 and their concomitant use should be considered with appropriate caution. Fertility, pregnancy and lactation: Pregnancy: There are no or limited amount of data from the use of opicapone in pregnant women. Animal studies are insufficient with respect to reproductive toxicity (see section 5.3). Ongentsy is not recommended during pregnancy. In women of childbearing potential not using contraception, Breast-feeding: It is unknown whether opicapone or its metabolites are excreted in human milk. A risk to the newborn/infants cannot be excluded. Breast-feeding should be discontinued during treatment with Ongentsy. Fertility: The effects of opicapone on fertility in humans have not been studied. Animal studies with opicapone do not indicate harmful effects with respect to fertility. Effects on ability to drive and use machines: Ongentsy in association with levodopa may have major influence on the ability to drive and use machines. Ongentsy may, together with levodopa, cause dizziness, symptomatich orthostatism and somnolence. Therefore, caution should be exercised when driving or using machines. Undesirable effects: Summary of the safety profile: The most common adverse reactions reported were nervous system effects. Dyskinesia was the most frequently reported treatment-emergent adverse reaction (17.7%). List of adverse reactions: Very common (≥ 1/100); Common (≥ 1/100 to < 1/10); Abnormal dreams, hallucination, hallucination visual, insomnia, dizziness, headache, somnolence, Orthostatic Hypotension, Constipation, Dry mouth, Vomiting, Muscle spasm, Blood pressure increased, Blood creatinine phosphokinase increased; Uncommon (< 1/1000 to < 1/100) Decreased appetite, Hyperglycemia, Anxiety, Depression, Hallucination auditory, Nightmares, Sleep disorder., Dysgeusia, Hyperkinesia, Syncope, Dry eye, Ear congestion, Palpitations, Hypertension, Hypotension, Dizziness, Abdominal distension, Abdominal pain, Abdominal pain upper, Gypsyecia, Muscle twitching, Muscle stiffness, Myalgia, Pain in extremity, Chromaturia, Nystagmus, Weight decreased. Reporting of suspected adverse reactions: Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit-risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via local regulations. Overdose There is no known specific antidote. Symptomatic and supportive treatment should be administered as appropriate. Removal of opicapone by gastric lavage and/or administration of activated charcoal should be considered. PHARMACOEPICAL PARTICULARS. List of excipients: Capsule content: Lactose monohydrate; Sodium starch glycolate; Type A, Maize starch, pregelatinized; Magnesium stearate. Capsule shell: Gelatin; Indigo carmine aluminium lake (E132); Erythrosine (E127); Titanium dioxide (E171). Pinting in: Shells: tranquil, white, transparent (E171), polyethylene glycol, ammonium, ammine. Special precautions for storage: This medicinal product does not require any special temperature storage conditions. Blister: Store in the original blister in order to protect from moisture. NATURE AND CONTENTS OF CONTAINER: OPA/PC/Aluminium foil containing 10, 30 or 60 tablets. MARKETING AUTHORISATION HOLDER: Bial - Portela & Cª, S.A., Avda. de Siderurgia Nacional, 4745-457, S. Mamede do Coronado, Portugal, Tel: +351 22 886 61 00, Fax: +351 22 886 61 60, e-mail: Info@bial.com. MARKETING AUTHORIZATION NUMBERS; EU/151/1064002/004 - DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORIZATION: Date of first authorisation: 24th June 2016. ONDE216/G/032
Simply Advanced

Our intuitive system allows for programming flexibility and options to treat a greater range of patients throughout their disease progression — from standard to more complex.