#### **Sunday, June 19, 2016**

# Therapeutic Plenary Session 1101 Update on the treatment of Parkinson's disease

**Liaison: Claudia Trenkwalder** 

Chairs	Presentation Titles	Faculty	Learning Objectives	
Daniela Berg Germany	Early Parkinson's disease: Modifying the definition of PD and early-stage treatment	Daniela Berg Germany	Recognize new strategies for defining Parkinson's disease and describe treatment principles for early stage Parkinson's disease	
David Burn UK	Treatment of dementia and depression in Parkinson's disease	Jaime Kulisevsky Spain	Recognize the issues involved in selecting the best options for treating mood disorders and cognition in Parkinson's disease	
	Treatment strategies for advanced Parkinson's disease	Angelo Antonini Italy	Describe treatment principles for advancing Parkinson's disease including non-oral therapies	
Recommended Audience:	Practitioners Non-physician Healt	Clinical academicians		

# Therapeutic Plenary Session 1102 Treatment of Dystonia, Ataxia and Chorea

Liaison: Hyder Jinnah

Chairs	Presentation Titles	Faculty	Learning Objectives
Cynthia Comella USA	Treatment of the Dystonias	Cynthia Comella USA	Summarize state-of-the-art treatment of the dystonias
Francisco Cardoso Brazil	Treatment of the Ataxias	Bart de Warrenburg Netherlands	Summarize state-of-the-art treatment of the ataxias
	Treatment of the Choreas	Ruth Walker USA	Summarize state-of-the-art treatment of the choreas
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

# Therapeutic Plenary Session 1103 Experimental strategies in Movement Disorders (including Parkinson's disease)

Liaison: Stephane Palfi

Chairs	Presentation Titles	Faculty	Learning Objectives
Patrick Brundin USA	Gene silencing strategies	Pedro Gonzalez Alegre USA	Recognize the principles of therapeutic gene silencing for movement disorders
TBD	Dopamine replacement strategies	Guido Nikkah Germany	Identify the principles of repairing the dopaminergic system and therapeutic-related options
	Alpha-synuclein modification strategies	Patrick Brundin USA	Integrate molecular mechanisms of alpha- synuclein related neurodegeneration and potential options for therapeutic interventions
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

# Therapeutic Plenary Session 1104 Comprehensive management of Parkinson's disease: a non-pharmacological perspective

Liaison: Alice Nieuwboer

Chairs	Presentation Titles	Faculty	Learning Objectives
Georg Ebersbach, Germany (local)	Exercise adherence from early to late disease: how do we manage and monitor it?	Terry Ellis USA	Identify methods to assess and facilitate exercise adherence from early to late disease
Janis Miyasaki Canada	Cognitive and behavioral interventions for alleviating nonmotor symptoms	Elke Kalbe Germany	Examine the rationale, potential and current evidence for cognitive and behavioral intervention to alleviate non-motor symptoms
	Palliative care, adopting a holistic approach	Janis Miyasaki Canada	Gain a comprehensive view of the benefits of a care network to meet palliative care needs
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

#### Monday, June 20, 2016

#### Plenary Session 2101 (Presidential Lectures)

Chairs	Presentation Titles	Faculty	Learning Objectives
Oscar Gershanik Argentina		D. James Surmeier USA	
Christopher Goetz USA		Eduardo Tolosa Spain	
Recommended Audience:	Basic scientists Clinical academic Non-physician He Practitioners Students/Residen	alth Professional	s

# Themed Plenary Session 2102 Stratifying Parkinson's disease(s): Implications for diagnosis and treatment

#### **Liaisons: Claudia Trenkwalder & Tim Anderson**

Chairs	Presentation Titles	Faculty	Learning Objectives
K. Ray Chaudhuri UK	Is there evidence for a predominant non-motor type of Parkinson's disease?	Brit Mollenhauer Germany	Describe non-motor features of Parkinson's disease and differentiate a predominant non-motor type of Parkinson's disease from a primarily motor type
Claudia Trenkwalder Germany	Are young and late onset presentations of Parkinson's disease different diseases?	Timothy Lynch Ireland	Recognize the role of age of onset in Parkinson's disease in classifying subtypes
	Are there personalized treatment strategies for different Parkinson's disease phenotypes?	Susan Fox Canada	Identify tailored treatment based on categorization
Recommended Audience:	Basic scientists Clinical academicia Practitioners Non-physician Hea Students/Residents	Ith Professionals	

## Themed Parallel Session 2203 Environment and neurodegeneration in Parkinson's disease

Liaison: Micaela Morelli

Chairs	Presentation Titles	Faculty	Learning Objectives
Micaela Morelli Italy	Acquired parkinsonism: exo-toxins and pharmacological agents	Micaela Morelli Italy	Estimate how utilization of toxin or specific drugs of abuse may influence the manifestation of neurodegenerative diseases
Caroline Tanner USA	Stress and neurodegeneration: from animal models to life events	Gerlinde Metz Canada	Assess if and how exposure to stress may cause neurodegeneration
	Systemic and local inflammation	Malu Tansey USA	Identify how neuroinflammatory changes may influence disease processes
Recommended Audience:	Basic scientists Clinical academicians Practitioners Students/Residents/Trainees		

### Themed Parallel Session 2204 Customizing treatment of movement disorder patients by phenotype

Liaison: Elena Moro & Stephane Palfi

Chairs	Presentation Titles	Faculty	Learning Objectives
Georg Ebersbach Germany	Optimizing treatment of movement disorders responsive to dopaminergic therapy	Paolo Barone Italy	Recognize the movement disorders that would benefit from targeted treatment
Jill Ostrem USA	Differential response to neurostimulation in parkinsonism(s)	Jill Ostrem USA	Identify the main characteristics/phenotypes of patients who will benefit most from focused treatments
	Differential response to neurostimulation in dystonia, chorea and tremor	Elena Moro France	Manage patient care by shaping the optimal medical and surgical treatment profile
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

### Parallel Session 2205 Plasticity in Parkinson's disease: From animal models to the clinic

Liaison: Yoshikazu Ugawa / Micaela Morelli

Chairs	<b>Presentation Titles</b>	Faculty	Learning Objectives
D. James Surmeier USA	Electrophysiological Plasticity of Basal Ganglia circuitry	D. James Surmeier USA	Describe abnormal plasticity in the basal ganglia in the animal models of Parkinson's disease
Jeffrey Kordower USA	Synaptic plasticity of denervated striatal neurons	Rosario Moratalla Spain	Describe the different forms of synaptic plasticity in Parkinson's disease
	Modulation of plasticity in Parkinson's disease patients	Yoshikazu Ugawa Japan	Explain the effects of anti-Parkisonian drugs on the plasticity and integrate them with the basic science findings for the future rTMS treatment of Parkinson's disease
Recommended Audience:	Basic scientists Clinical academicia Practitioners Non-physician Heal Students/Residents	th Professionals	

## Parallel Session 2206 Role of mitophagy in movement disorders

Liaison: Miquel Vila / Christine Klein

Chairs	Presentation Titles	Faculty	Learning Objectives
Miquel Vila Spain	Mitochondrial quality control by mitophagy in Parkinson's disease	Edward A. Fon Canada	Explain the role of mitophagy in Parkinson's disease pathogenesis and its potential therapeutic implications
TBD	Mitochondrial turnover in Parkinson's disease: Is it all about autophagy?	Aleksandar Rakovic Germany	Recognize the means by which mitochondrial turnover is regulated in Parkinson's disease
	Role of mitophagy in Huntington's disease	Marta Martinez- Vicente Spain	Discuss the emerging role of mitophagy in Huntington's disease
Recommended Audience:	Basic scientists Clinical academicians Students/Residents/T		

## Parallel Session 2207 So you think you know about dementia and Lewy bodies?

Liaison: Günther Höglinger

Chairs	Presentation Titles	Faculty	Learning Objectives
Kenji Kosaka Japan	Clinic and diagnosis of Minimal Cognitive Impairment (MCI) and dementia in synucleinopathies	Murat Emre Turkey	Identify mild cognitive impairment and dementia associated with Lewy body disease
Murat Emre Turkey	Risk factors and etiopathogenesis of dementia in Lewy body disease	Dag Aarsland Sweden	Identify risk factors and etiopathogenesis of associated with Lewy body disease
	Therapy of MCI and dementia in synucleinopathies	Kenji Kosaka Japan	Recognize current treatment options for dementia associated with Lewy body disease
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

## Themed Parallel Session 2208 Cross generational and pleiotropic phenotypes

Liaison: Christopher Goetz

Chairs	Presentation Titles	Faculty	Learning Objectives
Laurie Ozelius USA	Fragile X- associated disorders	Deborah Hall USA	Describe the clinical and molecular alterations associated with movement disorders that occur in children, parents, and grandparents with FMR1 gene expansions
Christopher Goetz USA	ATP1A3 and ADCY5	Niccolo Mencacci UK	List the clinical manifestations and molecular disruptions characteristic of ATP1A3 and ADCY5 mutations in different age groups
	PRRT2-Associated diseases: across the clinical and molecular spectrum	Darius Ebrahimi- Fakhari USA	Recognize both the clinical spectrum and neurobiology of PRRT2-associated diseases and age-dependent relationships
Recommended Audience:	Basic scientists Clinical academician Practitioners Non-physician Healt Students/Residents/	h Professionals	

# Teaching Course 2309 Myoclonus: clinical spectrum, electrophysiology and treatment

Liaison: Philip Thompson

Chairs	Presentation Titles	Faculty	Learning Objectives
Philip Thompson Australia	Cortical, subcortical, brainstem and spinal myoclonus: Clinical recognition and differential diagnosis	John Caviness USA	Recognize the clinical features associated with each subtype of myoclonus and generate a classification-oriented differential diagnosis
Peter Brown UK	Role of electrophysiology in recognition and classification of myoclonus	Peter Brown UK	Identify the electrodiagnostic tools in the assessment of and categorization of myoclonus-associated disorders
	New diagnostic strategies and an update on therapy	Marina de Koning Tijssen Netherlands	Review the evidence for first-, second-, and third-line treatment options for cortical vs. subcortical myoclonus
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

# Teaching Course 2310 Surgical management of movement disorders

Liaison: Lars Timmermann / Kelly Foote

Chairs	<b>Presentation Titles</b>	Faculty	Learning Objectives
Lars Timmermann Germany	Superficial or deep brain stimulation: mechanism of action, target choice, procedures	Kelly Foote USA	Describe the mechanism of action for superficial, transcranial and deep brain stimulation, their action at target and circuit levels, the surgical procedures
Kelly Foote USA	Surgery for Parkinson's disease: when, how and for how long	Lars Timmermann Germany	Recognize which patients with Parkinson disease can be addressed to surgery, how to assess the individual risk/benefit ratio and what is the expected outcome
	Surgery for dystonia and other hyperkinetic disorders: indications and outcomes	Takaomi Taira Japan	Recognize which patients with dystonia or other hyperkinetic disorders can be addressed to surgery, how to assess the individual risk/benefit ratio and what is the expected outcome
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health F Students/Residents/Tra		

# Skills Workshop 2411 Examination and interpretation of eye movements

**Liaison: Steven Frucht** 

Chairs	Presentation Titles	Faculty	Learning Objectives
TBD	TBD	Janet Rucker USA	Perform core eye movement examination, including assessment of saccades, pursuit, gaze holding, convergence, and vestibulo-ocular reflex function
TBD	TBD	Tim Anderson New Zealand	Recognize disorders of saccades, pursuits, and vestibulo-ocular reflex function in patients with movement disorders
			Identify nystagmus types (such as various forms of jerk nystagmus, pendular nystagmus) and other eye intrusions (for example square wave jerks and saccadic oscillations) pertinent to the movement disorders
Recommende d Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

#### Skills Workshop 2412 How to publish in Movement Disorders journal

Liaison: A. Jon Stoessl

Chairs	Presentation Titles	Faculty	Learning Objectives
TBD	TBD	Jose Obeso Spain	Identify whether articles are better targeted to MDJ or to MDCP
	TBD	Marcelo Merello Argentina	Describe the process that takes place during review, including initial submission, assignment of editors and reviewers or decision to reject without review, editorial discussion, revision and re-assessment
	TBD	Kailash Bhatia UK Extra speaker already faculty elsewhere	Recognize the factors contributing to a final decision to accept, reject or transfer
Recommende d Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

# Skills Workshop 2413 Differential diagnosis and treatment of speech and voice disorders

Liaison: K. Ray Chaudhuri

Chairs	Presentation Titles	Faculty	Learning Objectives
TBD	TBD	Julia Johnson UK	Recognize what speech and voice problems occur in Parkinson's disease, Parkinsonism and dystonia
	TBD	Serge Pinto France	Examine speech and voice related symptoms in clinic, elicit relevant signs and signpost related tests. Identify hyperkinetic, hypokinetic and ataxic dysarthria
			Describe how to manage dysarthria and related syndromes in Parkinson's disease
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

#### Skills Workshop 2414 Advanced use of botulinum toxin

**Liaison: Raymond Rosales** 

Chairs	Presentation Titles	Faculty	Learning Objectives
		Jorg Wissel Germany	Develop a practical way to observe, analyze movements and select muscles for botulinum toxin injection in complex cases of dystonia, spasticity and other movement disorders
		Katherine Alter USA	Recommend injection techniques and targeting for complex cases of dystonia, spasticity and other movement disorders
			Integrate the role of physiologic and similar testing in analyzing movement disorders and selecting muscles for chemodenervation
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

#### **Themed Video Session 2515**

Challenges in clinicogenetic correlations: One gene – many phenotypes; one phenotype – many genes

**Liaison: Carlo Colosimo** 

		Faculty	Learning Objectives
		Vladimir Kostic Serbia	Recognize complex phenotypes of monogenic mutations
		Kailash Bhatia UK	Recognize identical clinical presentations of different genetic mutations
			Discuss the complexity of the evolving role of genetics in movement disorders
Recommended Audience:	Clinical academicians Practitioners Students/Residents/Trainees		

#### Video Session 2516 Ataxia: Familial and sporadic

Liaison: Günther Höglinger

Chairs	Presentation Titles	Faculty	Learning Objectives
		Henry Houlden UK	Identify clinical clues to the differential diagnosis of acquired, sporadic and hereditary ataxias
		Maria Jesus Sobrido Spain	Recognize the systematic clinical work-up of ataxias
			Describe clinical symptoms typically associated with ataxias of different etiologies
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

## Video Session 2517 Rare genetic and metabolic disorders

Liaison: Claudia Trenkwalder

Chairs	Presentation Titles	Faculty	Learning Objectives
		Annu Aggarwal India	Diagnose neurometabolic disorders presenting in adulthood and childhood
		Roongroj Bhidayasiri Thailand	Recognize the range of conditions of metal disorders (Wilson's, NBIA, manganese and calcium deposition)
			Identify phenomena related to disorders of neurotransmitter synthesis (e.g., DRD), energy metabolism (e.g., POLG), and disorders involving lipid metabolism (e.g., NPC, CTX)
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

#### Video Session 2518

#### How to examine: a clinician perspective – bedside examination

**Liaison: Tim Anderson** 

	Faculty	Learning Objectives	
Marie Vidailhet France	Recognize examination strategies and techniques that best elicit and facilitate identification of movement disorders		
Dan Healy Ireland	Distinguish different movement disorders of the face and limbs revealed by examination strategies and techniques		
	Outline an approach to the examination of posture and gait, and have knowledge of clinical clues that identify the causative movement disorder		
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

#### **Tuesday, June 21, 2016**

### Themed Plenary Session 3101 Genotype meets phenotype

**Liaisons: Christine Klein & Hyder Jinnah** 

Chairs	Presentation Titles	Faculty	Learning Objectives
Carolyn Sue Australia	Hereditary movement disorders: Reconciling genotypes and phenotypes	Hyder Jinnah USA	Describe the often complex relationships between genotypes and phenotypes
Christine Klein Germany	Phenotyping vs. genotyping in Ataxias: new diagnostic approaches	Henry Paulson USA	Recognize new developments in molecular diagnosis for inherited movement disorders using ataxia as an example
	When one phenotype has many genotypes: implications for diagnosis in dystonia	Carolyn Sue Australia	Identify how advances in modern genetics have modified our view of Mendelian genetics using dystonia as an example
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

# Plenary Session 3102 Translating basic science into Parkinson's disease clinical practice

**Liaisons: Christine Klein** 

Chairs	Presentation Titles	Faculty	Learning Objectives
EK Tan Singapore	Moving from GWAS to EWAS: Epigenetics is going 'omics'	Katie Lunnon UK	Describe different model systems to develop new treatment approaches for Parkinson's disease
Katie Lunnon UK	Learning from drosophila: Moving basic science approaches into the clinic	Patrik Verstreken Belgium	Identify new insights into the pathophysiology of Parkinson's disease
	Translational aspects of iPSC models: New treatment approaches for Parkinson's disease	Ole Isacson USA	Recognize how to translate basic science findings into clinical practice
Recommended Audience:	Basic scientists Clinical academicians Students/Residents/Trainees		

### Parallel Session 3203 Applications of cutting edge technology in Movement Disorders

Liaison: Kelly Foote

Chairs	Presentation Titles	Faculty	Learning Objectives
TBD	Optogenetics and gene editing	Alexandra Nelson USA	Explain how novel, powerful tools such as optogenetics and gene editing are being used to elucidate the cellular and circuit mechanisms of movement disorders.
Elena Moro France	Non invasive stimulation strategies	Yochiro Shirota Japan	Describe potential therapeutic applications of rTMS and tDCS in the management of Parkinson's disease.
	Adaptive neuromodulation	Aaysegul Gunduz USA	Explore emerging applications of closed loop "smart DBS" both as a research tool and an enhanced therapeutic modality for neurocircuitry disorders.
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

#### **Themed Parallel Session 3204**

#### Penetrance of mutations in movement disorder genes: clues to endogenous disease protection?

#### **Liaisons: Vincenzo Bonifati**

Chairs	Presentation Titles	Faculty	Learning Objectives
Christine Klein Germany	Mechanisms of reduced penetrance in the dystonias	Laurie Ozelius USA	Summarize current knowledge about factors and mechanisms influencing penetrance in the dystonias
Matt Farrer Canada	Factors influencing penetrance of Parkinson's disease genetic determinants (LRRK2 and GBA)	Matt Farrer Canada	Discuss penetrance estimates for the most prevalent genetic determinants of Parkinson's disease (LRRK2 and GBA)
	Genetic and environmental risk factors: accomplices in Parkinson's disease manifestation	Alexis Elbaz France	Debate the respective roles of genetic and environmental risk factors in Parkinson's disease etiology
Recommended Audience:	Basic scientists Clinical academician Practitioners Non-physician Healt Students/Residents/	th Professionals	

### Parallel Session 3205 Role of developmental factors in the etiology and future therapy of Parkinson's disease

Liaison: Miquel Vila

Chairs	Presentation Titles	Faculty	Learning Objectives
Alain Prochiantz France	Homeoprotein signaling in neuronal development and degeneration	Alain Prochiantz France	Recognize the role of developmental factors in the etiology of Parkinson disease
Thomas Perlmann Sweden	NURR1 in Parkinson disease: from pathogenesis to therapeutic potential	Thomas Perlmann Sweden	Address the question whether it is already time for translation of basic research results to clinic
	Developmental factor Lmx1b and transcriptional control of autophagy in Parkinson disease	Ariadna Laguna Spain	Identify the active role of developmental factors in adulthood and their impact on autophagy and mitochondria with respect to their possible therapeutic value
Recommended Audience:	Basic scientists Clinical academicians Students/Residents/Trainees		

### Parallel Session 3206 Update on Huntington's disease and secondary chorea

Liaison: Eng-King Tan

Chairs	Presentation Titles	Faculty	Learning Objectives
Georg Bernhard Landwehrmeyer Germany	Genetics and animal models of Huntington's disease	Georg Bernhard Landwehrmeyer Germany	Identify the genetics and pathophysiology of Huntington disease
Tim Anderson New Zealand	Clinical Trials in Huntington's disease	Cristina Sampaio USA	Describe the overview of the latest clinical trials and their implications in Huntington disease
	Autoimmune and secondary choreas	Hui Fang Shang China	Comprehend the etiology, phenomenology and management of secondary forms of choreas
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

## Parallel Session 3207 Evidence based medicine update

**Liaison: Charles Adler** 

Chairs	Presentation Titles	Faculty	Learning Objectives
Susan Fox Canada	MDS-EBM Update on Parkinson's disease treatments	Rob De Bie The Netherlands	Describe the Evidence Based Medicine process and methodology
Joaquim Ferreira Portugal	MDS-EBM update on Tremor	Joaquim Ferreira Portugal	List MDS-EBM recommendations for treatments in Parkinson's disease, RLS and tremor
	MDS-EBM update on RLS	Birgit Hogl Austria	Discuss the gaps in therapies for common movement disorders
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

### Parallel Session 3208 Late breaking advances in clinical, basic and translational science

Liaison: Miquel Vila / K. Ray Chaudhuri

Chairs	<b>Presentation Titles</b>	Faculty	Learning Objectives
David Brooks UK	Neuroprotection, motor and non-motor clinical trials and relevant advances in Parkinson's: what have we learnt and missed?	Wolfgang Oertel Germany	Describe the latest advances in the therapy (motor and non-motor) as well as high quality clinical trials of Parkinson's disease
Michael Okun USA	What is the current state regarding advances in basic science and Parkinson's?	Serge Przedborski USA	Recognize the latest advances in basic science related to Parkinson's disease (models, pathophysiology as well as the future and unmet needs)
	Translating pearls of basic science to the wisdom of the clinic in Parkinson's disease	David Standaert USA	Identify the translational efforts at converting basic science based benchside knowledge to bedside clinical medicine related to therapy and investigational techniques.
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health P Students/Residents/Tra		

# Teaching Course 3309 Biomarkers for Parkinson's Disease

Liaison: Charles Adler

Chairs	Presentation Titles	Faculty	Learning Objectives
Charles Adler USA	Prodromal Parkinson's disease: Biomarkers for Pre- Motor Parkinson's Disease	Ron Postuma Canada	Recognize the importance of pre-motor or prodromal phase of Parkinson's disease
Daniela Berg Germany	Tissue Biomarkers for early Parkinson's disease and PD progression	Charles Adler USA	Discuss possible genetic, CSF, blood, saliva, and tissue biopsy biomarkers of Parkinson's disease
	Neuroimaging for assessing Parkinson's disease diagnosis and progression	David Brooks UK	Describe neuroimaging methods for Parkinson's disease diagnosis and disease progression
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

## Teaching Course 3310 Botulinum toxin treatment of movement disorders

Liaison: Raymond Rosales

Chairs	Presentation Titles	Faculty	Learning Objectives
Raymond Rosales Philippines	How to inject botulinum toxin for optimal outcome in dystonia, emphasizing common focal dystonias: blepharospasm and cervical dystonia	Raymond Rosales Philippines	Describe the techniques and methods of injection for common focal dystonias, blepharospasm and cervical dystonia that will maximize benefit and minimize side effects
Cynthia Comella USA	Botulinum toxin for the treatment of occupational dystonias	David Simpson USA	Recognize the pattern of muscle activation in the occupational dystonias for optimal muscle selection
	The many causes of secondary non-response to botulinum toxin for the treatment of dystonia	Peter Moore UK	Explain the common and uncommon causes for secondary failure of botulinum toxin for dystonia
Recommended Audience:	Clinical academicians Practitioners Students/Residents/Trainees		

# Parallel Session 3211 (1.5 hour Parallel) Wearable sensors, mobile applications and big data analytics in Movement Disorders

Liaison: Kelly Foote

Chairs	Presentation Titles	Faculty	Learning Objectives
Alberto Espay USA	Wearables	Jochen Klucken Germany	Describe emerging applications of wearable sensor technologies relevant to the diagnosis, prognosis and quality of life assessment of Parkinson's disease patients.
Per Odin Germany	Mobile Applications	Per Odin Germany	Identify promising applications of mobile devices for prevention/prediction and continuous monitoring of movement disorders.
	Technology assessment for gaits and falls	Jeffrey Hausdorf Israel	Provide an overview of the opportunities and hurdles for application of technology-enabled solutions for real-time gait analysis and fall prevention.
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

# Themed Skills Workshop 3412 Phenotyping of Parkinson's disease: Neuroimaging meets Neurophysiology

Liaisons: Irena Rektorova & Yoshikazu Ugawa

		Faculty	Learning Objectives
		Irena Rektorova Czech Republic	Recognize the use of advanced MRI techniques and neurophysiology methods in study of various phenotypes of Parkinson's disease
		Walter Paulus Germany	Identify specific patterns of grey matter atrophy, cortical excitability changes and brain functional connectivity changes associated with different motor and nonmotor symptoms of Parkinson's disease
			Explain how neuroimaging and non-invasive brain stimulation can be combined to enhance our understanding of brain deficits and compensation related to various Parkinson's disease phenotypes
Recommended Audience:	Basic scientists Clinical academic Practitioners Students/Residen		

# Skills Workshop 3413 (HP) A contemporary view on exercise in Movement Disorders

**Liaison: Alice Nieuwboer** 

Chairs	Presentation Titles	Faculty	Learning Objectives
		Gammon Earhart USA	Gain insight in the rationale for various forms of exercise using concepts of motor learning and exercise physiology
		Anat Mirelman Israel	Describe how technology can facilitate contemporary exercise delivery in Parkinson's disease
			Gain evidence-based recommendations on efficacy and dosing of different types of exercise
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

# Skills Workshop 3414 Optimizing the management of the DBS patient

Liaison: Elena Moro / Kelly Foote

Chairs	Presentation Titles	Faculty	Learning Objectives
		Fiorella Contarino The Netherlands	Recognize and address motor and non- motor issues in DBS patients
		Suneil Kalia Canada	Identify and manage surgical complications in DBS patients
			Optimize the multidisciplinary management of DBS patients
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

# Skills Workshop 3415 Practical issues in neuroimaging

Liaison: Charles Adler

Faculty	Learning Objectives	
Dana Jennings USA	Describe the neuroimaging techniques used in the field of movement disorders	
Klaus Seppi Austria	Develop a strategy for when to order specific tests and which tests to order in clinical practice to aid in the diagnosis of movement disorders	
	Discuss the typical neuroimaging patterns that are typical of movement disorders that will be encountered regularly in clinical practice	
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees	

#### Video Session 3516 Unusual movement disorders

**Liaison: Steven Frucht** 

Faculty	Learning Objectives	
Victor Fung Australia	Recognize less common inherited movement disorders	
Stephen Reich USA	Recognize less common acquired or idiopathic movement disorders	
	Describe an approach to the differential diagnosis of unusual movement disorders	
Recommended Audience:	Clinical academicians Health Professionals (Non-Physician) Practitioners Students/Residents/Trainees	

### Video Session 3517 Pediatric movement disorders

Liaison: Marina AJ de Koning-Tijssen

Faculty	<b>y</b>	Learning Objectives
Manju Kurian UK		Recognize the spectrum of common movement disorders in children
Jennifer Friedman USA		Recognize the spectrum of metabolic disorder related movement disorders in children
		Conduct a clinical approach to the diagnosis of movement disorders in children
Recommended Audience:	Practitio	academicians oners s/Residents/Trainees

## Video Session 3518 Diagnosis and treatment of functional movement disorders

Liaison: Marina de Koning-Tijssen

Faculty	Learning Objectives	
Mark Edwards UK	Recognize the clinical characteristics of functional movement disorders	
Mark Hallett USA	Describe the current treatment approaches in functional movement disorders	
	Apply neurophysiological tests to support the diagnosis of functional movement disorders	
Recommended Audience:	Clinical academicians Practitioners Students/Residents/Trainees	

#### Video Session 3519 Movement disorders in musicians

**Liaison: Steven Frucht** 

Faculty	<b>/</b>	Learning Objectives
Hans Christian Jabusch Germany  Describe movement disorders that afflicted famou		Describe movement disorders that afflicted famous musicians
Steven Fro USA	ucht	Discuss the epidemiology and phenomenology of musician's dystonia
Alexander Schmidt Germany		Identify the pathophysiology and management of musician's dystonia
Recommended Audience:	Practition Non-phys	cademicians

#### Wednesday, June 22, 2016

#### Plenary Session 4101

Novel technologies for medical decision support: the dawn of stratified and digitalized medicine in Parkinson's disease

**Liaison: Christine Klein** 

Chairs	<b>Presentation Titles</b>	Faculty	Learning Objectives		
Thomas Gasser Germany	Genetic stratification and deep phenotyping for precision medicine approaches in Parkinson's disease	Rejko Krueger Germany	Recognize novel concepts derived from ongoing international cohort programs for at risk, prodromal and de novo Parkinson's disease cohorts for defining subgroups of PD patients using genetic stratification and deep phenotyping strategies and apply to future diagnostic and treatment decisions		
Rejko Krueger Germany	The promise of pharmacogenomics for Parkinson's disease	David Simon USA	Describe the concept of rare forms of monogenic Parkinson's disease serving as a template to develop first mechanism-based treatments for subgroups of idiopathic PD patients and discuss predictors of therapeutic outcome for PD and the role of pharmacogenomics		
	Technology-enabled objective measures in Parkinson's disease: unmet needs, challenges and opportunities	Andrew Evans Australia	Describe the rapid evolution of novel technologies for device-based assessments of Parkinson's disease symptoms and data-driven decision support and discuss applications in diagnostic and therapeutic settings to increase patient engagement		
Recommende d Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees				

#### Plenary Session 4102 Grand Rounds

Chairs		Experts
Claudia Trenkw Germany	alder/	Werner Poewe Austria
Christine Klein Germany		Paul Greene USA
		Maria Stamelou Greece Andrea Kuehn Germany
Recommended Audience:	Non-physic Practitione	ademicians cian Health Professionals

### Themed Parallel Session 4203 The clinical spectrum of synucleinopathies and tauopathies

Liaison: Günther Höglinger

Chairs	Presentation Titles	Faculty	Learning Objectives
Irene Litvan USA	The spectrum of tauopathies: Progressive supranuclear palsy (PSP) and corticobasal degeneration (CBD)	Günther Höglinger Germany	Identify the broad spectrum of tauopathies presenting as PSP and CBS or overlapping symptomatology
Günther Höglinger Germany	The spectrum of glial synucleinopathies: Multiple System Atrophy (Type Parkinson / cerebellar Type / benign MSA)	Wassilios Meissner France	Examine the mechanisms of different aggregates of alpha-synuclein in glial cells causing various types of multiple system atrophy
	The spectrum of neuronal synucleinopathies	Irene Litvan USA	Differentiate the spectrum of neuronal synucleinopathies from idiopathic REM sleep behavior disorder, pure autonomic failure to the wide range of symptomatology in dementia with lewy bodies
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

#### Themed Parallel Session 4204 Non-motor issues in parkinsonism

**Liaison: Carlo Colosimo & Claudia Trenkwalder** 

Chairs	Presentation Titles	Faculty	Learning Objectives		
Tanya Simuni USA	Psychiatric disorders in parkinsonism	David John Burn UK	Recognize the clinical features of psychiatric disorders associated with parkinsonism		
Carlo Colosimo Italy	Autonomic dysfunction in parkinsonism(s)	Pietro Cortelli Italy	Recognize the symptoms of autonomic disorders and their treatments in parkinsonism		
	Fatigue and sleepiness	Tanya Simuni USA	Examine the pathophysiology and epidemiology of sleepiness and fatigue in parkinsonism		
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees				

### Parallel Session 4205 Prodromal Parkinson's disease - cohorts, underlying science and future trials

Liaison: Claudia Trenkwalder

Chairs	<b>Presentation Titles</b>	Faculty	Learning Objectives
Matthew Stern USA	Prodromal Parkinson's disease cohorts	Claudia Trenkwalder Germany	Describe different cohorts of prodromal Parkinson's disease and their pitfalls and bottlenecks encountered
Alex Iranzo Spain	Impaired gastric motility, intestinal dysfunction and hyposmia in REM sleep behavior disorder patients - the search for a primary endpoint	Alex Iranzo Spain	Identify early markers of REM sleep behavioral abnormalities in relation to hyposmia and constipation
	Gastrointestinal and autonomic dysfunction in animal models	Penny Hallett USA	Evaluate the findings in animal models of prodromal Parkinson's disease for their impact on the diagnosis of Parkinson's disease
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professiona Students/Residents/Trainees	ls	

### Parallel Session 4206 What's new in tremor?

Liaison: Yoshikazu Ugawa

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Chairs		Presentation Titles	Faculty	Learning Objectives
Günther Deusc Germany	chl	Should we redefine essential tremor?	Rodger Elble USA	Interpret mechanisms underlining essential tremor and discuss its redefinition
Anthony Lang Canada		What is dystonic tremor?	Anthony Lang Canada	Define dystonic tremor and understand its pathomechanism
		Surgical treatments for tremor	Andres Lozano Canada	Recognize the potential of surgical approaches including DBS, gamma knife and ultrasound techniques
Recommended Audience:	Basic scientists Clinical academicians Practitioners Students/Residents/Trainees			

### Parallel Session 4207 Striatal interneurons and pathophysiology of Movement disorders

**Liaison: Marie-Francoise Chesselet** 

Chairs	<b>Presentation Titles</b>	Faculty	Learning Objectives		
D. James Surmeier USA	Striatal interneuronal networks controlling movement	James Tepper USA	Describe the contribution of interneurons to striatal networks controlling movement		
Antonio Pisani Italy	Striatal cholinergic interneurons play a key role in dystonia	Antonio Pisani Italy	Describe the role of cholinergic interneurons in the pathophysiology of dystonia and potential therapeutic strategies targeting them		
	Why cholinergic interneurons still matter in Parkinson's disease	Stephanie Cragg UK	Describe the role of cholinergic interneurons in the pathophysiology of Parkinson's disease and potential therapeutic strategies targeting them		
Recommended Audience:	Basic scientists Clinical academicians Students/Residents/Trainees				

### Parallel Session 4208 Complex gait disorders: mechanisms, evaluation and treatment

Liaison: Alice Nieuwboer

Chairs	Presentation Titles	Faculty	Learning Objectives
Alice Nieuwboer Belgium	New insights in the neural circuitry involved in gait and balance disorders	Veronique Vanderhorst USA	Describe the functional and neuroanatomical advances underlying gait disorders
Andres Ceballos- Baumann Germany	Mechanisms underlying freezing of gait and higher order gait disorders	Alice Nieuwboer Belgium	Describe the different models underlying complex gait problems
	Novel concepts in the evaluation and management of complex gait disorders	Bas Bloem The Netherlands	Identify the most recent approaches in clinical management of gait disorders
Recommended Audience:	Basic scientists Clinical academicians Students/Residents/Trainees		

# Themed Teaching Course 4309 Complex phenotypes and genotypes – seeing the wood for the trees

Liaison: Tim Anderson

Chairs	Presentation Titles	Faculty	Learning Objectives
Sarah Tabrizi UK	Huntington's disease and HD-like disorders	Sarah Tabrizi UK	Recognize what other disorders can masquerade as HD and what are the clues to their diagnosis
E.K. Tan Singapore	Ataxias	Kathrin Buerk Germany	Identify clinical characteristics that aid in narrowing the differential diagnosis in the ataxias and focus genetic testing
	Hereditary spastic paraparesis	Kishore Kumar Australia	Recognize the expanding spectrum of HSP presentation and identify particular clinical features that can aid diagnosis of type and targeted genetic testing
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

### Teaching Course 4310 Cerebellar ataxias: the essentials

Liaison: Günther Höglinger

Chairs	Presentation Titles	Faculty	Learning Objectives
Alexandra Durr France	Genetic ataxias: overview and diagnostic approach	Alexandra Dürr France	Identify the most important genetic causes of ataxia and know how to implement new testing strategies in the diagnostic work-up
Tetsuo Ashizawa USA	MSA-C and other degenerative ataxias	Thomas Klockgeth Germany	ldentify how to distinguish experimental treatments in the different degenerative ataxias and to be aware of the key managing issues in MSA-C
	Immune-mediated and other acquired ataxias	Tetsuo Ashizawa USA	Identify that some ataxias are immune-mediated and amenable to treatment, and how to test for these and other acquired causes of ataxias
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

#### Skills Workshop 4411 Lessons from my patients

**Liaison: Philip Thompson** 

Facult	tv	Learning Objectives	
Orlando Barsottini Brazil		Recognize the value of critical review of cases where diagnosis and management have been revised	
Thomas Kimber Australia		Identify common pitfalls in the evaluation of movement disorders	
		Recognize the merits of reassessing clinical features and management	
Recommended Audience:			

#### Skills Workshop 4412 Neurology without borders

Liaison: Elena Moro

Faculty	Learning Objectives
Mark Guttman Canada	Describe the available technologies to expand neurology practice
Esther Cubo Spain	Discuss the application of teleneurology in education and in managing patients with movement disorders
	Describe strategies for implementation of telemedicine beyond borders
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees

# Skills Workshop 4413 Pain in Parkinson's disease: insights and management

**Liaison: Alice Nieuwboer** 

Faculty	Learning Objectives	
Santiago Perez Lloret Argentina	Describe the pathophysiology, prevalence and clinical manifestation of different types of pain in Parkinson's disease	
Michele Tinazzi Italy	Gain insight in pain rating scales that are validated for Parkinson's disease as a basis for pain management	
	Identify emerging pharmacological and non-pharmacological management strategies of pain	
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees	

#### Skills Workshop 4414 MDS – UPDRS/UDyRS

**Liaison: Christopher Goetz** 

Faculty	Learning Objectives
Glenn T. Stebbins USA	Complete ratings on the MDS-UPDRS and UdysRS
Anette Schrag UK	Describe the conceptual constructs of the MDS-UPDRS and UDysRS
	Explain to patients and caregivers the role they play in the MDS-UPDRS and UDysRS assessments
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees

# Skills Workshop 4415 Presenting the MDS genotype phenotype toolbox

Liaison: Christine Klein

Faculty	Learning Objectives
Connie Marras Canada	Describe the limitations of the current nomenclature and classification of genetic movement disorders
Christina Lill Germany	Describe the proposed solution by the Movement Disorders Society Task Force on Genetics and understand its limitations and perspectives
	Recognize the value of the online tool being developed by the Movement Disorders Society for addressing genotype-phenotype relationships and implications for diagnosis
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees

## Video Session 4516 What if it's not Huntington's disease?

**Liaison: Carlo Colosimo** 

Faculty		Learning Objectives
Anna Rita Bentivoglio Italy		Recognize the phenomenology of Huntington's disease and other disorders in which chorea is the main clinical feature
Anne-Catherine Bachoud – Levi France		Recognize the clinical features of Huntington's disease-like (HDL) syndromes
		Outline appropriate approach and diagnostic work-up for patients with chorea
Recommended Audience: Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		Health Professionals

#### Video Session 4517 Drug-induced Movement Disorders

Liaison: Tim Anderson

Faculty	Learning Objectives
Mohit Bhatt India	Identify clues leading to the suspicion of drug-induced movement disorders
Pille Taba Estonia	Distinguish common and some uncommon acute, subacute and tardive or chronic drug-induced movement disorders
	Recognize psycho-stimulant induced movement disorders and associated neurologic features
Recommended Audience:	Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees

### Video Session 4518 Update on Paroxysmal movement disorders / Fluctuating movement disorders

Liaison: Raymond Rosales

Faculty		Learning Objectives	
Emmanuel Ro France	oze	Characterize the forms of paroxysmal dyskinesia (classical forms and variants)	
Beomseok Jeon Korea  Approach, using an algorithm, the diagnosis and the etiology of paroxysmal movement disorders		Approach, using an algorithm, the diagnosis and the etiology of paroxysmal movement disorders	
		Define the differential diagnostic points in epilepsia partialis and the look-alikes	
Recommended Audience:			

#### Thursday, June 23, 2016

## Plenary Session 5101 RLS, RBD – new approaches to movement disorders in sleep

Liaison: Claudia Trenkwalder

Chairs	<b>Presentation Titles</b>	Faculty	Learning Objectives
Wolfgang Oert Germany	Wolfgang Oertel Germany  RLS a neurodevelopment disorders of the basal ganglia? - update on pathophysiology and genetics		Understand current pathophysiological concepts and the neurodevelopmental component of RLS related to the genetic architecture and environmental factors
Birgit Hogl Austria	Neuropathology and pathophysiology of RBD	Bradly Boeve USA	Describe neuropathological findings of neurodegeneration in REM sleep behavior disorder
	Assessments of RBD in clinical practice – new tools	Isabelle Arnulf Paris	Recognize the basics for quantitative EMG assessment, video-PSG and scales for assessment of RBD and appreciate some of the available computerized tools
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

#### **Controversies in Movement Disorders 5102**

**Liaison: Christopher Goetz** 

Presentatio Titles	n Faculty		Learning Objectives	
Genotype shou influence treatm decisions in the clinic	ent Yes:	No: Eduardo Tolosa Spain	At the end of this session, participants will be able to:  Recognize how movement disorder phenotypes have different genetic causes  Evaluate whether shared phenotypes with different genetic causes leads to treatment decisions  Compare treatment outcomes among shared phenotypes with different genotype etiologies	
All dopamine agonists are basically the san terms of Parkins disease treatmer	on's France	No: K. Ray Chaudhuri UK	At the end of this session, participants will be able to:  Recognize the neurochemical and pharmacokinetic differences among dopamine agonists  Evaluate the relative clinical impact of different dopamine agonists  Design a treatment plan for patients receiving agonist therapy	
Recommended Audience:	Basic scientists Clinical academicians Non-physician Health Professionals Practitioners Students/Residents/Trainees			

#### Blue Ribbon Highlights 5103

	Chairs		Faculty		
W	arren Olanow USA	Basic Science	Marie Chesselet France	Review recent developments in the basic science field of movement disorders	
Louis Tan Singapore		Clinical	Caroline Tanner USA	Discuss an overview of recent clinical developments	
				Define an overall perspective on current topics of interest in movement disorders	
Recommended Audience:	Non phycician Haalth Drotaccianale				

### Themed Parallel Session 5204 The interface of autoimmunity and movement disorders

Liaison: Hyder Jinnah

Chairs	<b>Presentation Titles</b>	Faculty	Learning Objectives
Hyder Jinnah USA	Antibodies in movement disorders: clinical approach, pitfalls, future challenges	M Hadjivassiliou UK	Identify a spectrum of antibodies associated with movement and sleep disorders phenotypes
VA Lennon USA	Gluten-associated neurological disorders and related immune-mediated conditions	Vanda Lennon USA	Describe evidence both for and against gluten-associated neurological disorders
	New and emerging disorders	Bettina Balint UK	Describe recently discovered antibodies and the evidence needed to link them with movement and sleep disorders phenotypes
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Profes Students/Residents/Trainees		

### Themed Parallel Session 5205 Lysosomal alterations as a unifying theme underlying Parkinson disease and related synucleinopathies

**Liaison: Christine Klein** 

Chairs	<b>Presentation Titles</b>	Faculty	Learning Objectives
Roy Alcalay USA	Lysosomal alterations as a unifying theme underlying Parkinson's disease and related synucleinopathies	Ellen Sidransky USA	Identify the basic principles of lysosome biology and how these are linked to synucleinopathies
Marie- Francoise Chesselet France	GBA-related Parkinson disease: Intermediate phenotypes and biomarkers	Roy Alcalay USA	Describe the genetic links that relate Parkinson disease and related synucleinopatheis to lysosomal pathways
	The role of autophagy in Parkinson's disease pathogenesis	Leonidas Stefanis Greece	Recognize the new biomarker and therapeutic prospects that emerge from the connection between lysosomal alterations and synucleinopathies
Recommended Audience:	Basic scientists Clinical academicians Students/Residents/Trainee	s	

#### Parallel Session 5206 Endemic atypical parkinsonism

**Liaison: Raymond Rosales** 

Chairs	Chairs Presentation Titles		Faculty	Learning Objectives	
Nobutaka Hattori Japan		Clinical, pathological and genetic features of atypical parkinsonism in the island of Guam	John C. Steele Canada	Define the clinical and epidemiological features of endemic atypical parkinsonism	
Raymond Rosales Philippines		I ISIANO DI PANAVANO IIS DEDELLO		Recognize the possible foci of endemic atypical parkinsonian disorders worldwide	
		Geographical cluster of progressive supranuclear palsy in Northern France	Lawrence Golbe USA	Elucidate the genetic and environmental causes of endemic atypical parkinsonian syndromes	
Recommended Audience:	Basic scientists Clinical academicians Practitioners Students/Residents/Trainees				

### Parallel Session 5207 The Cerebellum in health and disease

Liaison: Hyder Jinnah

Chairs	<b>Presentation Titles</b>	Faculty	Learning Objectives
Mark Hallett USA	The role of the cerebellum in normal movement	Mario Manto Belgium	Describe the role of the cerebellum in normal motor control
Mario Manto Belgium	The role of the cerebellum in Parkinson's disease	Rich Helmich The Netherlands	Describe the role of the cerebellum in Parkinson's disease
	The role of the cerebellum in dystonia	Alfredo Berardelli Italy	Describe the role of the cerebellum in dystonia and tremor
Recommended Audience:	Basic Scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees		

### Parallel Session 5208 IPS modeling and cell therapy

Liaison: Ole Isacson

Chairs Presentation		Presentation Titles	Faculty	Learning Objectives		
Stephen Finkbeiner USA		iPS modeling of pathological mechanisms in neurological disease	Richard Wade-Martins UK	Recognize the study of pathobiology of disease using human iPS cells		
Ole Isacson USA		3		Describe the neurobiology of Huntington's disease and new approaches using iPS cells		
		Accomplishing functional restoration using iPS cells in Parkinson's disease	Jun Takahashi Japan	Recognize the experimental evaluation and applications of cell therapy		
Recommended Audience:						

### Parallel Session 5209 Primary familial brain calcification (PFBC): genes, phenotypes, and mechanisms

**Liaison: Vincenzo Bonifati** 

Chairs		<b>Presentation Titles</b>	Faculty	Learning Objectives		
Giovanni Coppola USA		Spectrum of genetic mutations causing primary familial brain calcifications and their penetrance	Ana Westenberger Germany	Describe the mutational spectra and penetrance in genetically confirmed forms of primary familial brain calcification		
Ana Westenberger Germany		Y I IBANINA IA PERU. I PIANCE		Summarize known and proposed pathophysiological mechanisms of primary familial brain calcification		
		Clinical and neuroimaging features of genetically confirmed PFBC	Giovanni Coppola USA	Discuss the neuroimaging and clinical phenotypes of genetically confirmed forms of primary familial brain calcification		
Recommended Audience:	·········   Practitioners					

# Teaching Course 5310 Genetic testing for movement disorders: which, why, and when

**Liaison: Vincenzo Bonifati** 

Chairs		Presentation Titles	Faculty	Learning Objectives	
Vincenzo Bonifati The Netherlands		Parkinson's disease	Vincenzo Bonifati The Netherlands	Review the Mendelian genes known to cause Parkinson's disease to determine if there is an indication for routine genetic testing.	
Christian Wider Switzerland		Dystonia	Christian Wider Switzerland	Review the Mendelian genes known to cause isolated dystonia and discuss whether gene testing should be used clinically to guide approaches to therapy	
		Spinocerebellar ataxias	Ebba Lohmann Turkey	Review the Mendelian genes that cause Spinocerebellar Ataxias to determine if there is a clinical use of genetic testing and how that should be accomplished: individual tests or comprehensive panel	
Recommended Audience:	Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees				

# Teaching Course 5311 Movement Disorder Emergencies: Recognition and management

Liaison: Eng-King Tan

Chairs		Presentation Titles	Faculty	Learning Objectives	
Heinz Reichmann Germany		Hyperkinetic emergencies	Carlo Colosimo Italy	Recognize the clinical features, and outline management strategies in patients with more require emergent interventions	
Stewart Factor USA		Hypokinetic emergencies	Shen Yang Lim Malaysia	Recognize the risk or precipitating factors and prodromal symptoms or signs that are associated with specific form movement disorder emergencies	
			Stewart Factor USA	Recognize and employ appropriate treatme emergencies associated with movement di	
Recommended Audience:  Basic scientists Clinical academicians Practitioners Non-physician Health Professionals Students/Residents/Trainees					