The *Movement* Disorder Society's

11th International Congress of Parkinson's Disease and Movement Disorders

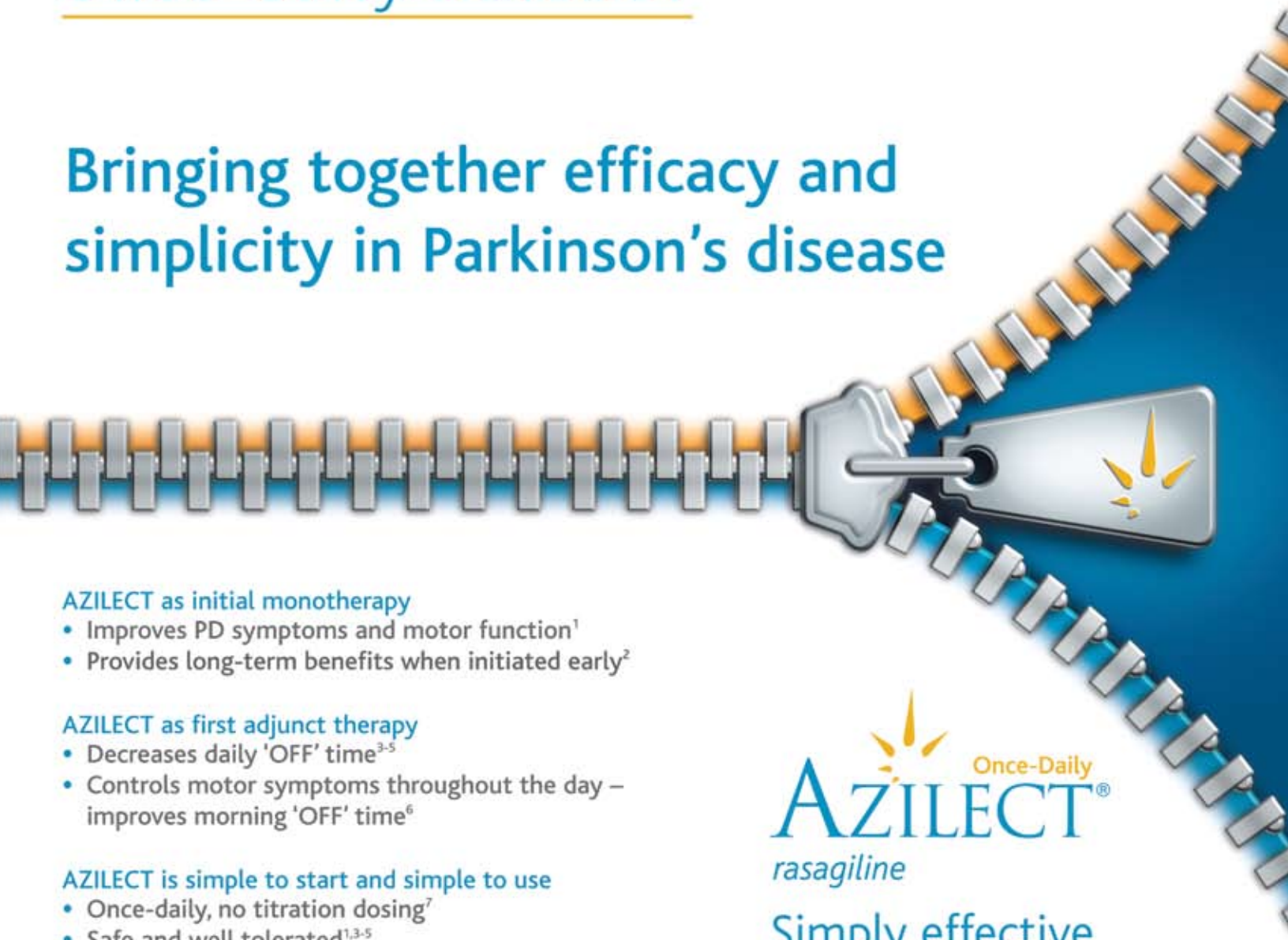
Final Program

Istanbul, Turkey

June 3-7, 2007

Once-daily AZILECT®

Bringing together efficacy and simplicity in Parkinson's disease



AZILECT as initial monotherapy

- Improves PD symptoms and motor function[1]
- Provides long-term benefits when initiated early[2]

AZILECT as first adjunct therapy

- Decreases daily 'OFF' time[3-5]
- Controls motor symptoms throughout the day – improves morning 'OFF' time[6]

AZILECT is simple to start and simple to use

- Once-daily, no titration dosing[7]
- Safe and well tolerated[1,3-5]

Once-Daily
AZILECT®
rasagiline

Simply effective

EU abbreviated prescribing information: Name: Azilect® 1mg **Active substance:** Rasagiline mesylate **Indication:** Treatment of idiopathic Parkinson's disease (PD) as monotherapy (without levodopa) or as adjunct therapy (with levodopa) in patients with end of dose fluctuations. **Contraindications:** Hypersensitivity to the active substance or to any of the excipients. Concomitant treatment with other monoamine oxidase inhibitors (MAOI) or pethidine is contraindicated. At least 14 days should elapse between discontinuation of rasagiline and initiation of treatment with monoamine oxidase inhibitors or pethidine. Rasagiline is contraindicated in patients with severe hepatic insufficiency. **Special warnings and precautions:** The concomitant use of rasagiline and fluoxetine or fluvoxamine should be avoided. At least five weeks should elapse between discontinuation of fluoxetine and initiation of treatment with rasagiline. At least 14 days should elapse between discontinuation of rasagiline and initiation of treatment with fluoxetine or fluvoxamine. The concomitant use of rasagiline and dextromethorphan or sympathomimetics such as those present in nasal and oral decongestants or cold medications containing ephedrine or pseudoephedrine is not recommended. Caution should be used when initiating treatment with rasagiline in patients with mild hepatic insufficiency. Rasagiline use in patients with moderate hepatic impairment should be avoided. **Interactions:** In view of the MAO inhibitory activity of rasagiline, antidepressants should be administered with caution. Co-administration of rasagiline and ciprofloxacin (or other potent inhibitors of -CYP1A2) should be administered with caution. There is a risk that the plasma levels of rasagiline in smoking patients could be decreased. See also interactions listed in the contraindications and special warning sections. **Pregnancy and lactation:** Caution should be exercised when prescribing to pregnant women. Caution should be exercised when rasagiline is administered to a breast-feeding mother. **Adverse reactions with at least 2% difference over placebo: Monotherapy:** Headache, arthalgia, dyspepsia, flu syndrome, depression, conjunctivitis, malaise, neck pain. **Adjunctive therapy:** dyskinesia, accidental injury (primarily falls), postural hypotension, weight loss, constipation, abdominal pain, vomiting. **Posology:** 1 mg once daily with or without levodopa. It can be taken with or without food. **Overdose:** Symptomatic treatment: Patients should be monitored and the appropriate symptomatic treatment and supportive therapy instituted. **Absorption:** Rasagiline is rapidly absorbed, reaching peak plasma concentration (Cmax) in approximately 0.5 hours. **Elimination:** Rasagiline undergoes almost complete biotransformation in the liver prior to excretion. It is eliminated primarily via urine and secondarily via faeces. Less than 1% of rasagiline is excreted as unchanged product in urine. **Administration:** Orally as 1 mg tablets. **European Marketing Authorisation Holder:** Teva Pharma GmbH, Germany. **Distributor:** H. Lundbeck A/S, Denmark.

References 1. Parkinson Study Group. A controlled trial of rasagiline in early Parkinson disease. Arch Neurol 2002; 59: 1937-1943. **2.** Hauser RA, Lew MF, Hurtig HI, Ondo WG, Wojcieszek J and the TEMPO Extension Study Group. Early treatment with rasagiline is more beneficial than delayed treatment start in the long-term management of Parkinson's disease: analysis of the TEMPO ITT cohort. Poster presented at 16th International Congress on Parkinson's Disease and Related Disorders, June 5-9, 2005, Berlin, Germany. **3.** Poewe W for PRESTO and LARGO investigators. Rasagiline provides significant benefits as adjunct therapy in patients with moderate Parkinson's disease: subgroup analyses. Poster presented at the 10th Congress of the European Federation of Neurological Societies, September 2-5, 2006, Glasgow, UK. **4.** Parkinson Study Group. A randomised, placebo-controlled trial of rasagiline in levodopa-treated patients with Parkinson disease and motor fluctuations. Arch Neurol 2005; 62: 241-248. **5.** Rascol O, Brooks DJ, Melamed E et al for the LARGO study group. Rasagiline as an adjunct to levodopa in patients with Parkinson's disease and motor fluctuations (LARGO study: a randomized, double-blind, parallel-group trial. Lancet 2005; 365: 947-954. **6.** Stocchi F, Brooks DJ, Melamed E et al on behalf of the LARGO study group. Effect of rasagiline on severity of OFF in Parkinson's disease. Eur J Neurol 2004; 11[Suppl 2]:10. P2278. **7.** Azilect® Summary of Product Characteristics.

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The *Movement* Disorder Society's
11th International Congress of Parkinson's Disease and Movement Disorders
June 3-7, 2007 • Istanbul, Turkey

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Milwaukee, WI 53202 USA
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Fax: +1 414-276-3349
Web site: www.movementdisorders.org
E-mail: congress@movementdisorders.org

Welcome Letter

Dear Colleagues,

On behalf of The *Movement* Disorder Society (MDS), we are pleased to welcome you to Istanbul, Turkey for the 11th International Congress of Parkinson's Disease and Movement Disorders. The 11th International Congress has been designed to provide an innovative and comprehensive overview of the latest perspectives and research developments in the field of Movement Disorders.

We encourage you to take every opportunity to participate in the Scientific Program which has drawn world renowned speakers and foremost experts in their respective fields. In the next days, the latest research regarding Movement Disorders will be presented and discussed in an open format, offering unique educational opportunities for all delegates.

The International Congress convenes with a series of Opening Symposia and then continues with an array of Plenary, Parallel, Poster and Video Sessions, as well as Controversies, Skills Workshops and Meet the Expert sessions. New this year are How-To-Do-It sessions, which will bring a unique dynamic to the program.

Please save time in your schedule to participate in the Opening Ceremony and Welcome Reception on Sunday evening, as well as the Gala Event on Wednesday evening. These social events will celebrate the unique culture of Istanbul, and will incorporate some of the stunning views the city has to offer.

On behalf of The *Movement* Disorder Society, we would like to welcome you to Istanbul and thank you for your participation in this auspicious event.

With best regards,

Anthony E. Lang, MD, FRCPC
President, The *Movement* Disorder Society, 2007-2008

Eduardo Tolosa, MD
Chair, 2007 Congress Scientific Program Committee

Murat Emre, MD
Chair, 2007 Congress Local Organizing Committee

Acknowledgements

The International Congress Oversight Committee of the 11th International Congress of Parkinson's Disease and Movement Disorders wishes to acknowledge and thank the following companies for their support:

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- American Academy of Neurology 2006 guidelines estimate that "Ten to 20% of people with Parkinson's disease may be eligible for surgical treatments"[3]

For more information visit: www.doitsooner.com

References: 1. Based on a patient survey of 143 implanted patients. Data on file at Medtronic, Inc. 2. The Deep-Brain Stimulation for Parkinson's Disease Study Group. Deep-brain stimulation of the subthalamic nucleus or the pars interna of the globus pallidus in Parkinson's disease. *N Engl J Med.* 2001;345:956-963. 3. American Academy of Neurology. AAN Guideline Summary for Patients and Their Families: Medical and Surgical Treatment for Motor Fluctuations and Dyskinesia in Parkinson Disease; 2006.

About MDS

The *Movement* Disorder Society (MDS) is an international, professional society of clinicians, scientists, and other healthcare professionals who are interested in Parkinson's disease, related neurodegenerative and neurodevelopmental disorders, hyperkinetic Movement Disorders, and abnormalities in muscle tone and motor control. The spectrum of clinical disorders represented by the Society includes, but is not limited to:

Ataxia
Blepharospasm
Dysphonia
Dystonic disorders
Gait disorders
Huntington's disease
Myoclonus
Parkinson's disease
Restless legs syndrome
Spasticity
Tardive dyskinesia
Tics and Tourette syndrome
Tremor

The *Movement* Disorder Society (MDS) was founded in 1985 on the initiative of Professors Stanley Fahn and C. David Marsden, whose leadership and vision guided the expansion of clinical expertise and research in this field. The organization merged in 1988 with the International Medical Society for Motor Disturbances.

PURPOSE, MISSION AND GOALS

Purpose:

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

About MDS

Mission and Goals:

To disseminate knowledge about Movement Disorders by:

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

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

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

To formulate and promote public policy that will favorably affect the care of patients with Movement Disorders by:

- Working with regulatory agencies to assist them in the approval process of safe and effective therapeutic interventions
- Informing the public (media) and patient support groups of new research and therapeutic advances
- Playing a proactive role in the development of policies that affect support of research and patient care
- Developing standards of training in the specialty

MDS OFFICERS (2007-2008)

President
Anthony E. Lang, Canada

President-Elect
Philip D. Thompson, Australia

Secretary
Olivier Rascol, France

Secretary-Elect
Matthew B. Stern, USA

Treasurer
Yoshikuni Mizuno, Japan

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Oscar S. Gershanik, Argentina

Past President
Andrew J. Lees, United Kingdom

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Shu-Leong Ho, China
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Andrew J. Lees, United Kingdom
Yoshikuni Mizuno, Japan
C. Warren Olanow, USA
Philip D. Thompson, Australia

About MDS

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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

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11th International Congress of
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Gustavo Roman
Webster Ross

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Austen Peter Moore
Werner Poewe
Olivier Rascol
Bob Van Hilten

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Marwan I. Hariz
Zvi Israel
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Efstathios Papavassiliou
Hiroki Toda
Ali T. Zirh

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Co-Chair: Murat Emre
Dag Aarsland
G.A. Broe
Richard Brown
David John Burn
Jeffrey L. Cummings
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Olivier Rascol
Cristina Sampaio
Glenn Stebbins

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UPDRS Part I
Chair: Werner Poewe
Bruno Dubois
Anette Schrag

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Peter Le Witt

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UPDRS Part IV
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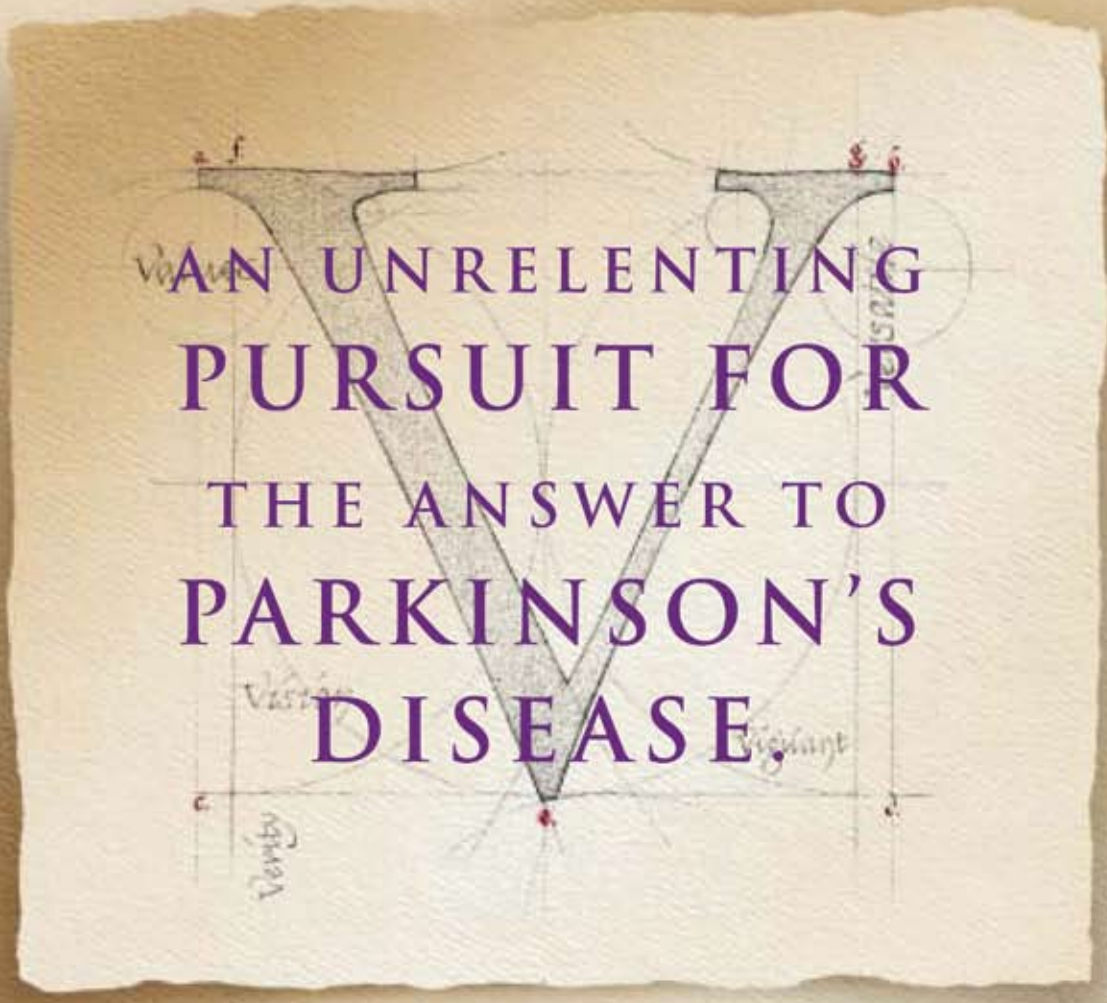
Olivier Rascol
Bob Van Hilten

Scale Development Standards
Chair: Glenn Stebbins
Robert Holloway
David Nyenhuis

Appendices
Chair: Cristina Sampaio
Richard Dodel
Jaime Kulisevsky

Statistical Testing
Chair: Barbara C. Tilley
Sue Leurgans
Jean Teresi

MDS Committee and Task Force Chairs and members will meet during the International Congress. A schedule of these meetings will be provided to the Committee and Task Force members. The Committee and Task Force schedule of meetings will also be displayed on signage in the Society's Exhibit Booth, located on the first floor of the Istanbul Convention and Exhibition Centre.



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International Congress Registration and Venue

Badges
All International Congress attendees will receive a name badge with their registration materials. Badges should be worn at all times as they will be used to control access into all International Congress sessions and activities. Individuals will be identified as follows:

Red = Delegate
Yellow = Exhibitor
Orange = Exhibitor Delegate
Green = Guest
Purple = Press
Black = Staff

Dates
Sunday, June 3, 2007 through Thursday, June 7, 2007

Hotel Information
Hilton
Cumhuriyet Caddesi
Harbiye-Istanbul 34367
Turkey
Tel: +90 212 315 6000
Fax: +90 212 240 4165

Hyatt Regency
Taskisla Caddesi, Taksim
Istanbul, 34437
Turkey
Tel: +90 212 368 1234
Fax: +90 212 368 1000

Topkon Congress Services
Topkon is the 11th International Congress Housing Bureau. If you have any concerns regarding your hotel accommodations, please contact Topkon or visit their booth located on the main level of the Istanbul Convention and Exhibition Centre.

Topkon Congress Services
Headquarter Office
Zühtü Pasa Mah. Rifat Bey Sokak No: 24
PK. 34724 Kalamis-Kadiköy, Istanbul
Turkey
Tel: + 90 216 330 90 20
Fax: + 90 216 330 90 05
E-mail: congress@topkon.com
Web Site: www.topkon.com

Language
The official language of the International Congress is English.

Registration Desk
Location: Main Entrance, First Floor, Istanbul Convention and Exhibition Centre

Name badges, session tickets, special event tickets and International Congress registration bag tickets can be collected at the International Congress Registration Desk located in the Main Entrance of the Istanbul Convention and Exhibition Centre.

Registration Desk Hours
Saturday, June 2..... 4:00 p.m. to 8:00 p.m.
Sunday, June 3..... 7:00 a.m. to 8:30 p.m.
Monday, June 4 ..... 7:00 a.m. to 9:00 p.m.
Tuesday, June 5..... 7:00 a.m. to 7:00 p.m.
Wednesday, June 6..... 7:00 a.m. to 7:30 p.m.
Thursday, June 7 ..... 7:00 a.m. to 5:00 p.m.

Venue
Istanbul Convention and Exhibition Centre (ICEC)
Istanbul Lutfi Kirdar Convention and Exhibition Centre
Lutfi Kirdar Uluslararasi Kongre ve Sergi Sarayi
Harbiye 80230 Istanbul
Turkey
Tel: + 90 212 296 3055
Fax: + 90 212 224 0878
http://www.icec.org/en/index.asp

International Congress Information

Abstract Volume

All abstracts accepted for poster presentation have been published in an abstract supplement to the MDS Journal, *Movement* Disorders. Each delegate should have received one copy with their registration materials. MDS members will receive an additional copy with an MDS Journal issue.

Abstracts-On-CD-ROM

All abstracts published in the supplement to the MDS Journal are available by Abstracts-On-CD-ROM sponsored by MDS and supported by an unrestricted educational grant from Medtronic. To obtain a copy, please visit the Medtronic Booth (# 109) located in the Rumeli Building, upper floor.

Continuing Medical Education

Objectives

As a result of participating in this activity, the attendee should be better able to:

- Describe the pathophysiology and neurobiology of Parkinson's disease and other Movement Disorders;
- Discuss the diagnostic approaches and tools available for Parkinson's disease and other Movement Disorders;
- Discuss the pharmacological and non-pharmacological treatment options available for Parkinson's disease and other Movement Disorders.

Target Audience

The target audience of the 11th 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.

Faculty Financial Disclosure Information

It is the policy of The *Movement* Disorder Society (MDS) to ensure balance, independence, objectivity and scientific rigor in all sponsored educational activities. All faculty 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 whose products or services are related to the subject matter of the presentation topic. The intent of this policy is not to prevent a speaker with a potential conflict of interest from making a presentation. It is merely intended that 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.

Faculty financial disclosure information will be provided to participants onsite in Istanbul.

Please see the program addendum in your International Congress registration bag for complete information regarding faculty disclosure of commercial relationships.

Faculty Disclosure of Unlabeled Product Use Discussion

Presentations which provide information in whole or in part related to non-approved uses for drug products and/or devices must clearly acknowledge the unlabeled indications or the investigative nature of their proposed uses to the audience. Speakers who plan to discuss non-approved uses for commercial products and/or devices must advise the International Congress audience of their intent. Please see the program addendum in your International Congress registration bag for complete information regarding faculty disclosure of unlabeled product use discussion.

Evaluations

Please take time to complete the evaluation forms provided for each session you attend. Your input and comments are essential in planning future educational programs for MDS.

When completed, evaluations may be returned to your meeting room attendants, the evaluation drop boxes or to the MDS Registration Desk.

Internet Café

Location: Istanbul Convention and Exhibition Centre, Second Floor and Rumeli Building, First Level

Internet access is available to meeting attendees in two convenient locations, the ICEC and Rumeli Building. Please limit your Internet use to 15 minutes to allow other attendees use of this service. This service is supported through an unrestricted educational grant from Lundbeck Turkey.

International Congress Information

MDS Exhibit and Information Booth

Location: Main Lobby, First Floor, Istanbul Convention and Exhibition Centre

The *Movement* Disorder Society (MDS) is an International Society of healthcare professionals committed to research and patient care in the fields of Parkinson's disease and other disorders of movement and motor control.

Created not only to further the goals and objectives of MDS International, The *Movement* Disorder Society's regional sections, the Asian and Oceanian Section and European Section, strive to increase the interest, education and participation of neurologists, Movement Disorder specialists, non-Movement Disorder specialists, trainees, allied health professionals and scientists in the Asian, Oceanian and European regions.

MDS supports and promotes a wide range of educational programming and other initiatives to advance scientific understanding and standards of care as they pertain to Movement Disorders. For this, MDS provides forums such as a high ranking journal, scientific symposia and International Congresses.

Attendees are invited to take advantage of MDS member benefits by applying to the Society. Learn more about MDS initiatives and speak with a representative at the MDS Exhibit and Information Booth located in the main lobby of the Istanbul Convention and Exhibition Centre during the following hours:

Sunday, June 3	12:00 p.m. to 7:00 p.m.
Monday, June 4	8:00 a.m. to 7:00 p.m.
Tuesday, June 5	8:00 a.m. to 7:00 p.m.
Wednesday, June 6	8:00 a.m. to 7:00 p.m.
Thursday, June 7	8:00 a.m. to 4:30 p.m.

No Cameras

Cameras are not permitted in any 11th International Congress educational sessions or in the poster areas.

Opening Ceremony and Welcome Reception

Location: Istanbul Convention and Exhibition Centre, First Floor and the Rumeli Gardens

The Opening Ceremony will take place on Sunday, June 3, at 7:30 p.m. The Welcome Reception will immediately follow the Opening Ceremony in the Rumeli Gardens. These events are open to all delegates and registered guests.

Optional Tours Desk

Location: Main Lobby, First Floor, Istanbul Convention and Exhibition Centre

Tours have been arranged by Topkon Congress Services. Please visit the Tours Desk located near the Registration Area in the Main Lobby on the first floor of the Istanbul Convention and Exhibition Centre to check in for the tours. Additional tour tickets may be purchased at the desk, based on availability.

Press Room

Location: Office I, Istanbul Convention and Exhibition Centre

Members of the working media receive waived registration fees for the 11th International Congress. Journalists and writers should report to the Press Room with their credentials to register for the International Congress and wear their name badge for admittance into MDS sessions. The Press Room will be open during the following hours:

Sunday, June 3	8:00 a.m. to 5:00 p.m.
Monday, June 4	8:00 a.m. to 5:00 p.m.
Tuesday, June 5	8:00 a.m. to 5:00 p.m.
Wednesday, June 6	8:00 a.m. to 5:00 p.m.
Thursday, June 7	8:00 a.m. to 5:00 p.m.

International Congress Information

Scientific Sessions

The 2007 Scientific Program incorporates Opening Symposia, Plenary and Parallel Sessions, Skills Workshops, Video Sessions, How-To-Do-It Sessions, Meet the Expert Sessions, Poster Sessions, and Controversies and Skills Workshops.

Although the ever popular Opening Symposia and Plenary Sessions follow a style similar to the 2004 Rome and 2005 New Orleans International Congresses, meet the Expert Sessions, Parallel Sessions and Skills Workshops are designed to meet the need for smaller, more focused sessions. These sessions are offered to an audience size of 50-200 participants resulting in greater opportunities for audience participation.

Tickets are required for admission into all Parallel Sessions, Video and Meet the Expert Sessions, Skills Workshops and How-To-Do-It Sessions. There is no additional fee for tickets to these sessions. Please check the onsite Registration Desk for availability of these tickets.

Poster Sessions

Location: Rumeli Hall, Lower Level

Delegate feedback from past International Congresses has indicated great interest in Poster Sessions. Poster Sessions are featured each day based upon the following schedule:

Poster Session 1

Location: Rumeli Hall, Lower Level

Tuesday, June 5
Poster Viewing: 9:00 a.m. to 4:00 p.m.
Authors Present: 12:30 p.m. to 2:30 p.m.
Abstracts: 33-345, and poster 683

Poster Session 2

Location: Rumeli Hall, Lower Level

Wednesday, June 6
Poster Viewing: 9:00 a.m. to 4:00 p.m.
Authors Present: 12:30 p.m. to 2:30 p.m.
Abstracts: 346-662, and Poster 788

Poster Session 3

Location: Rumeli Hall, Lower Level

Thursday, June 7
Poster Viewing: 9:00 a.m. to 4:00 p.m.
Authors Present: 12:30 p.m. to 2:30 p.m.
Abstracts: 663-973

Speaker Ready Room

Location: Sultan II, Ground Floor, Istanbul Convention and Exhibition Centre

All speakers must check in at the Speaker Ready Room with presentation materials on the day prior to their scheduled presentation. Equipment is available to allow faculty to review their presentations. Audiovisual personnel will be available for assistance. The Speaker Ready Room hours are as follows:

Saturday, June 2	4:00 p.m. to 8:00 p.m.
Sunday, June 3	7:00 a.m. to 8:30 p.m.
Monday, June 4	7:00 a.m. to 9:00 p.m.
Tuesday, June 5	7:00 a.m. to 7:00 p.m.
Wednesday, June 6	7:00 a.m. to 7:00 p.m.
Thursday, June 7	7:00 a.m. to 4:30 p.m.

Visit us on the Web at
www.movementdisorders.org

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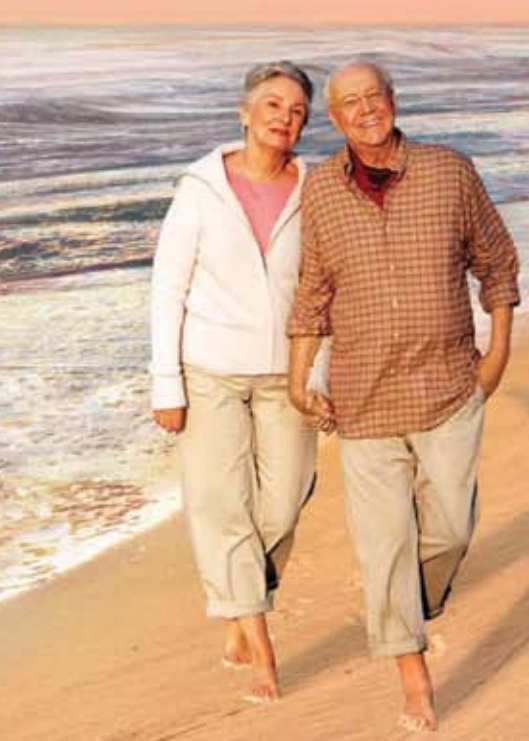
FOR THE INITIAL AND LONG-TERM TREATMENT OF PARKINSON'S DISEASE (PD)

Staying in rhythm **with life**



Stay in rhythm with your patients' needs

- MIRAPEX, as initial monotherapy, enables early PD patients to maintain their everyday activities.[1]
- MIRAPEX, in combination with levodopa, helps improve functioning in advanced PD.[2]
- MIRAPEX significantly reduces levodopa-resistant tremor.[3]
- MIRAPEX can help save levodopa for when it's really needed.[4]

IMPORTANT INFORMATION ABOUT MIRAPEX:

- MIRAPEX is indicated for the treatment of the signs and symptoms of idiopathic Parkinson's disease.
- Patients have reported falling asleep without perceived warning signs during activities of daily living, including operation of a motor vehicle, which sometimes resulted in accidents. Postural (orthostatic) hypotension may occur.
- The most commonly reported adverse events in early and late disease in clinical trials were dizziness, dyskinesia, extrapyramidal syndrome, hallucinations, headache, insomnia, somnolence, and nausea.

References: 1. Shannon KM, Bennett JP, Friedman JH, for the Pramipexole Study Group. Efficacy of pramipexole, a novel dopamine agonist, as monotherapy in mild to moderate Parkinson's disease. *Neurology*. 1997;49:724-728. **2.** Lieberman A, Ranhosky A, Korts D. Clinical evaluation of pramipexole in advanced Parkinson's disease: results of a double-blind, placebo-controlled, parallel-group study. *Neurology*. 1997;49:162-168. **3.** Möller JC, Oertel WH, Köster J, Pezzoli G, Provinciali L. Long-term efficacy and safety of pramipexole in advanced Parkinson's disease: results from a European multicenter trial. *Mov Disord*. 2005;20:602-610. **4.** Barone P, Bressman S. Pramipexole without levodopa as early treatment for Parkinson's disease: a long-term follow-up of 717 patients. Poster presented at: 53rd Annual Meeting of the American Academy of Neurology; May 5-11, 2001; Philadelphia, Pa.

Please see accompanying Brief Summary of Prescribing Information, including new precaution.
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Boehringer Ingelheim

Pexola® pramipexole

Mirapex® pramipexole dihydrochloride tablets

Managing movement and more

Mirapex® (pramipexole dihydrochloride) **Brief Summary of Prescribing Information**
0.125 mg, 0.25 mg, 0.5 mg, 1 mg, and 1.5 mg tablets

INDICATIONS AND USAGE

Parkinson's Disease: MIRAPEX tablets are indicated for the treatment of the signs and symptoms of idiopathic Parkinson's disease.

Restless Legs Syndrome: MIRAPEX tablets are indicated for the treatment of moderate-to-severe primary Restless Legs Syndrome (RLS).

CONTRAINDICATIONS: MIRAPEX tablets are contraindicated in patients who have demonstrated hypersensitivity to the drug or its ingredients.

WARNINGS: Falling Asleep During Activities of Daily Living

Patients treated with Mirapex® (pramipexole dihydrochloride) have reported falling asleep while engaged in activities of daily living, including the operation of motor vehicles which sometimes resulted in accidents. Although many of these patients reported somnolence while on MIRAPEX tablets, some perceived that they had no warning signs such as excessive drowsiness, and believed that they were alert immediately prior to the event. Some of these events had been reported as late as one year after the initiation of treatment.

Somnolence is a common occurrence in patients receiving MIRAPEX tablets at doses above 1.5 mg/day (0.5 mg TID) for Parkinson's disease. In controlled clinical trials in RLS, patients treated with MIRAPEX tablets at doses of 0.25-0.75 mg once a day, the incidence of somnolence was 6% compared to an incidence of 3% for placebo-treated patients (see ADVERSE EVENTS). Many clinical experts believe that falling asleep while engaged in activities of daily living always occurs in a setting of pre-existing somnolence, although patients may not give such a history. For this reason, prescribers should continually reassess patients for drowsiness or sleepiness, especially since some of the events occur well after the start of treatment. Prescribers should also be aware that patients may not acknowledge drowsiness or sleepiness until directly questioned about drowsiness or sleepiness during specific activities.

Before initiating treatment with MIRAPEX tablets, patients should be advised of the potential to develop drowsiness and specifically asked about factors that may increase the risk with MIRAPEX tablets such as concomitant sedating medications, the presence of sleep disorders, and concomitant medications that increase pramipexole plasma levels (e.g., cimetidine – see PRECAUTIONS, Drug Interactions). If a patient develops significant daytime sleepiness or episodes of falling asleep during activities that require active participation (e.g., conversations, eating, etc.), MIRAPEX tablets should ordinarily be discontinued. If a decision is made to continue MIRAPEX tablets, patients should be advised to not drive and to avoid other potentially dangerous activities. While dose reduction clearly reduces the degree of somnolence, there is insufficient information to establish that dose reduction will eliminate episodes of falling asleep while engaged in activities of daily living.

Symptomatic Hypotension: Dopamine agonists, in clinical studies and clinical experience, appear to impair the systemic regulation of blood pressure, with resulting orthostatic hypotension, especially during dose escalation. Parkinson's disease patients, in addition, appear to have an impaired capacity to respond to an orthostatic challenge. For these reasons, both Parkinson's disease patients and RLS patients being treated with dopaminergic agonists ordinarily require careful monitoring for signs and symptoms of orthostatic hypotension, especially during dose escalation, and should be informed of this risk (see **PRECAUTIONS, Information for Patients**).

In clinical trials of pramipexole, however, and despite clear orthostatic effects in normal volunteers, the reported incidence of clinically significant orthostatic hypotension was not greater among those assigned to Mirapex® (pramipexole dihydrochloride) tablets than among those assigned to placebo. This result, especially with the higher doses used in Parkinson's disease, is clearly unexpected in light of the previous experience with the risks of dopamine agonist therapy.

While this finding could reflect a unique property of pramipexole, it might also be explained by the conditions of the study and the nature of the population enrolled in the clinical trials. Patients were very carefully titrated, and patients with active cardiovascular disease or significant orthostatic hypotension at baseline were excluded. Also, clinical trials in patients with RLS did not incorporate orthostatic challenges with intensive blood pressure monitoring done in close temporal proximity to dosing.

Hallucinations: In the three double-blind, placebo-controlled trials in early Parkinson's disease, hallucinations were observed in 9% (35 of 368) of patients receiving MIRAPEX tablets, compared with 2.6% (6 of 235) of patients receiving placebo. In the four double-blind, placebo-controlled trials in advanced Parkinson's disease, where patients received MIRAPEX tablets and concomitant levodopa, hallucinations were observed in 16.5% (43 of 260) of patients receiving MIRAPEX tablets compared with 3.8% (10 of 264) of patients receiving placebo. Hallucinations were of sufficient severity to cause discontinuation of treatment in 3.1% of the early Parkinson's disease patients and 2.7% of the advanced Parkinson's disease patients compared with about 0.4% of placebo patients in both populations.

Age appears to increase the risk of hallucinations attributable to pramipexole. In the early Parkinson's disease patients, the risk of hallucinations was 1.9 times greater than placebo in patients younger than 65 years and 6.8 times greater than placebo in patients older than 65 years. In the advanced Parkinson's disease patients, the risk of hallucinations was 3.5 times greater than placebo in patients younger than 65 years and 5.2 times greater than placebo in patients older than 65 years.

In the RLS clinical program, one pramipexole-treated patient (of 689) reported hallucinations; this patient discontinued treatment and the symptoms resolved.

PRECAUTIONS

Rhabdomyolysis: A single case of rhabdomyolysis occurred in a 49-year-old male with advanced Parkinson's disease treated with MIRAPEX tablets. The patient was hospitalized with an elevated CPK (10,631 IU/L). The symptoms resolved with discontinuation of the medication. **Renal:** Since pramipexole is eliminated through the kidneys, caution should be exercised when prescribing Mirapex® (pramipexole dihydrochloride) tablets to patients with renal insufficiency (see **DOSAGE AND ADMINISTRATION** in full Prescribing Information). **Dyskinesia:** MIRAPEX tablets may potentiate the dopaminergic side effects of levodopa and may cause or exacerbate preexisting dyskinesia. Decreasing the dose of levodopa may ameliorate this side effect. **Retinal Pathology in Albino Rats:** Pathologic changes (degeneration and loss of photoreceptor cells) were observed in the retina of albino rats in the 2-year carcinogenicity study. While retinal degeneration was not diagnosed in pigmented rats treated for 2 years, a thinning in the outer nuclear layer of the retina was slightly greater in rats given drug compared with controls. Evaluation of the retinas of albino mice, monkeys, and minipigs did not reveal similar changes. The potential significance of this effect in humans has not been established, but cannot be disregarded because disruption of a mechanism that is universally present in vertebrates (i.e., disk shedding) may be involved (see **ANIMAL TOXICOLOGY**).

Events Reported with Dopaminergic Therapy: Although the events enumerated below may not have been reported in association with the use of pramipexole in its development program, they are associated with the use of other dopaminergic drugs. The expected incidence of these events, however, is so low that even if pramipexole caused these events at rates similar to those attributable to other dopaminergic therapies, it would be unlikely that even a single case would have occurred in a cohort of the size exposed to pramipexole in studies to date. ***Withdrawal-Emergent Hyperpyrexia and Confusion:*** Although not reported with pramipexole in the clinical development program, a symptom complex resembling the neuroleptic malignant syndrome (characterized by elevated temperature, muscular rigidity, altered consciousness, and autonomic instability), with no other obvious etiology, has been reported in association with rapid dose reduction, withdrawal of, or changes in antiparkinsonian therapy. ***Fibrotic Complications:*** Although not reported with pramipexole in the clinical development program, cases of retroperitoneal fibrosis, pulmonary infiltrates, pleural effusion, and pleural thickening, pericarditis, and cardiac valvulopathy have been reported in some patients treated with ergot-derived dopaminergic agents. While these complications may resolve when the drug is discontinued, complete resolution does not always occur.

Although these adverse events are believed to be related to the ergoline structure of these compounds, whether other, nonergot derived dopamine agonists can cause them is unknown.

A small number of reports have been received of possible fibrotic complications, including peritoneal fibrosis, pleural fibrosis, and pulmonary fibrosis in the post-marketing experience for Mirapex® (pramipexole dihydrochloride) tablets. While the evidence is not sufficient to establish a causal relationship between MIRAPEX tablets and these fibrotic complications, a contribution of MIRAPEX tablets cannot be completely ruled out in rare cases. ***Melanoma:*** Some epidemiologic studies have shown that patients with Parkinson's disease have a higher risk (perhaps 2- to 4-fold higher) of developing melanoma than the general population. Whether the observed increased risk was due to Parkinson's disease or other factors, such as drugs used to treat Parkinson's disease, was unclear. MIRAPEX tablets are one of the dopamine agonists used to treat Parkinson's disease. Although MIRAPEX tablets have not been associated with an increased risk of melanoma specifically, its potential role as a risk factor has not been systematically studied. Patients using MIRAPEX tablets for any indication should be made aware of these results and should undergo periodic dermatologic screening.

Impulse Control/Compulsive Behaviors: Cases of pathological gambling, hypersexuality, and compulsive eating (including binge eating) have been reported in patients treated with dopamine agonist therapy, including pramipexole therapy. As described in the literature, such behaviors are generally reversible upon dose reduction or treatment discontinuation.

Rebound and Augmentation in RLS: Reports in the literature indicate treatment of RLS with dopaminergic medications can result in a shifting of symptoms to the early morning hours, referred to as rebound. Rebound was not reported in the clinical trials of MIRAPEX tablets but the trials were generally not of sufficient duration to capture this phenomenon. Augmentation has also been described during therapy for RLS. Augmentation refers to the earlier onset of symptoms in the evening (or even the afternoon), increase in symptoms, and spread of symptoms to involve other extremities. In a controlled trial of MIRAPEX tablets for RLS, approximately 20% of both the Mirapex- and placebo-treated patients reported at least a 2-hour earlier onset of symptoms during the day by the end of 3 months of treatment. The frequency and severity of augmentation and/or rebound after longer-term use of MIRAPEX tablets and the appropriate management of these events have not been adequately evaluated in controlled clinical trials.

Information for Patients (also see Patient Package Insert): Patients should be instructed to take MIRAPEX tablets only as prescribed.

Patients should be alerted to the potential sedating effects associated with MIRAPEX tablets, including somnolence and the possibility of falling asleep while engaged in activities of daily living. Since somnolence is a frequent adverse event with potentially serious consequences, patients should neither drive a car nor engage in other potentially dangerous activities until they have gained sufficient experience with Mirapex® (pramipexole dihydrochloride) tablets to gauge whether or not it affects their mental and/or motor performance adversely. Patients should be advised that if increased somnolence or new episodes of falling asleep during activities of daily living (e.g., watching television, passenger in a car, etc.) are experienced at any time during treatment, they should not drive or participate in potentially dangerous activities until they have contacted their physician. Because of possible additive effects, caution should be advised when patients are taking other sedating medications or alcohol in combination with MIRAPEX tablets and when taking concomitant medications that increase plasma levels of pramipexole (e.g., cimetidine).

Patients should be informed that hallucinations can occur and that the elderly are at a higher risk than younger patients with Parkinson's disease. In clinical trials, patients with RLS treated with pramipexole rarely reported hallucinations.

Patients and caregivers should be informed that impulse control disorders/compulsive behaviors may occur while taking medicines to treat Parkinson's disease or RLS, including MIRAPEX tablets. These include pathological gambling, hypersexuality, and compulsive eating (including binge eating). If such behaviors are observed with MIRAPEX tablets, dose reduction or treatment discontinuation should be considered.

Patients may develop postural (orthostatic) hypotension, with or without symptoms such as dizziness, nausea, fainting or blackouts, and sometimes, sweating. Hypotension may occur more frequently during initial therapy. Accordingly, patients should be cautioned against rising rapidly after sitting or lying down, especially if they have been doing so for prolonged periods and especially at the initiation of treatment with MIRAPEX tablets.

Because the teratogenic potential of pramipexole has not been completely established in laboratory animals, and because experience in humans is limited, patients should be advised to notify their physicians if they become pregnant or intend to become pregnant during therapy (see **PRECAUTIONS, Pregnancy**).

Because of the possibility that pramipexole may be excreted in breast milk, patients should be advised to notify their physicians if they intend to breast-feed or are breast-feeding an infant.

If patients develop nausea, they should be advised that taking MIRAPEX tablets with food may reduce the occurrence of nausea.

Laboratory Tests: During the development of MIRAPEX tablets, no systematic abnormalities on routine laboratory testing were noted. Therefore, no specific guidance is offered regarding routine monitoring; the practitioner retains responsibility for determining how best to monitor the patient in his or her care.

Drug Interactions: *Carbidopa/levodopa:* Carbidopa/levodopa did not influence the pharmacokinetics of pramipexole in healthy volunteers (N=10). Pramipexole did not alter the extent of absorption (AUC) or the elimination of carbidopa/levodopa, although it caused an increase in levodopa C_{max} by about 40% and a decrease in T_{max} from 2.5 to 0.5 hours. *Selegiline:* In healthy volunteers (N=11), selegiline did not influence the pharmacokinetics of pramipexole. *Amantadine:* Population pharmacokinetic analyses suggest that amantadine may slightly decrease the oral clearance of pramipexole. *Cimetidine:* Cimetidine, a known inhibitor of renal tubular secretion of organic bases via the cationic transport system, caused a 50% increase in pramipexole AUC and a 40% increase in half-life (N=12). *Probenecid:* Probenecid, a known inhibitor of renal tubular secretion of organic acids via the anionic transporter, did not noticeably influence pramipexole pharmacokinetics (N=12). *Other drugs eliminated via renal secretion:* Population pharmacokinetic analysis suggests that coadministration of drugs that are secreted by the cationic transport system (e.g., cimetidine, ranitidine, diltiazem, triamterene, verapamil, quinidine, and quinine) decreases the oral clearance of pramipexole by about 20%, while those secreted by the anionic transport system (e.g., cephalosporins, penicillins, indomethacin, hydrochlorothiazide, and chlorpropamide) are likely to have little effect on the oral clearance of pramipexole. *CYP interactions:* Inhibitors of cytochrome P450 enzymes would not be expected to affect pramipexole elimination because pramipexole is not appreciably metabolized by these enzymes in vivo or in vitro. Pramipexole does not inhibit CYP enzymes CYP1A2, CYP2C9, CYP2C19, CYP2E1, and CYP3A4. Inhibition of CYP2D6 was observed with an apparent Ki of 30 µM, indicating that pramipexole will not inhibit CYP enzymes at plasma concentrations observed following the clinical dose of 4.5 mg/day (1.5 mg TID). *Dopamine antagonists:* Since pramipexole is a dopamine agonist, it is possible that dopamine antagonists, such as the neuroleptics (phenothiazines, butyrophenones, thioxanthenes) or metoclopramide, may diminish the effectiveness of Mirapex® (pramipexole dihydrochloride) tablets.

Drug/Laboratory Test Interactions: There are no known interactions between MIRAPEX tablets and laboratory tests.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Two-year carcinogenicity studies with pramipexole have been conducted in mice and rats. Pramipexole was administered in the diet to Chbb:NMRI mice at doses of 0.3, 2, and 10 mg/kg/day [0.3, 2.2, and 11 times the Maximum Recommended Human Dose (MRHD) (MRHD of 1.5 mg TID on a mg/m^2 basis)]. Pramipexole was administered in the diet to Wistar rats at 0.3, 2, and 8 mg/kg/day (plasma AUCs were 0.3, 2.5, and 12.5 times the AUC in humans at the MRHD). No significant increases in tumors occurred in either species.

Pramipexole was not mutagenic or clastogenic in a battery of assays, including the in vitro Ames assay, V79 gene mutation assay for HGPRT mutants, chromosomal aberration assay in Chinese hamster ovary cells, and in vivo mouse micronucleus assay.

In rat fertility studies, pramipexole at a dose of 2.5 mg/kg/day (5 times the MRHD on a mg/m^2 basis), prolonged estrus cycles and inhibited implantation. These effects were associated with reductions in serum levels of prolactin, a hormone necessary for implantation and maintenance of early pregnancy in rats.

Pregnancy: Teratogenic Effect: Pregnancy Category C: When pramipexole was given to female rats throughout pregnancy, implantation was inhibited at a dose of 2.5 mg/kg/day (5 times the MRHD on a mg/m^2 basis). Administration of 1.5 mg/kg/day of pramipexole to pregnant rats during the period of organogenesis (gestation days 7 through 16) resulted in a high incidence of total resorption of embryos. The plasma AUC in rats at this dose was 4 times the AUC in humans at the MRHD. These findings are thought to be due to the prolactin-lowering effect of pramipexole, since prolactin is necessary for implantation and maintenance of early pregnancy in rats (but not rabbits or humans). Because of pregnancy disruption and early embryonic loss in these studies, the teratogenic potential of pramipexole could not be adequately evaluated. There was no evidence of adverse effects on embryo-fetal development following administration of up to 10 mg/kg/day to pregnant rabbits during organogenesis (plasma AUC was 71 times that in humans at the MRHD). Postnatal growth was inhibited in the offspring of rats treated with 0.5 mg/kg/day (approximately equivalent to the MRHD on a mg/m^2 basis) or greater during the latter part of pregnancy and throughout lactation.

There are no studies of pramipexole in human pregnancy. Because animal reproduction studies are not always predictive of human response, pramipexole should be used during pregnancy only if the potential benefit outweighs the potential risk to the fetus.

Nursing Mothers: A single-dose, radio-labeled study showed that drug-related materials were excreted into the breast milk of lactating rats. Concentrations of radioactivity in milk were three to six times higher than concentrations in plasma at equivalent time points.

Other studies have shown that pramipexole treatment resulted in an inhibition of prolactin secretion in humans and rats.

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from pramipexole, a decision should be made as to whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use: The safety and efficacy of Mirapex® (pramipexole dihydrochloride) tablets in pediatric patients has not been established.

Geriatric Use: Pramipexole total oral clearance was approximately 30% lower in subjects older than 65 years compared with younger subjects, because of a decline in pramipexole renal clearance due to an age-related reduction in renal function. This resulted in an increase in elimination half-life from approximately 8.5 hours to 12 hours. In clinical studies with Parkinson's disease patients, 38.7% of patients were older than 65 years. There were no apparent differences in efficacy or safety between older and younger patients, except that the relative risk of hallucination associated with the use of MIRAPEX tablets was increased in the elderly. In clinical studies with RLS patients, 22% of patients were at least 65 years old. There were no apparent differences in efficacy or safety between older and younger patients.

ADVERSE EVENTS

Parkinson's Disease: During the premarketing development of pramipexole, patients with either early or advanced Parkinson's disease were enrolled in clinical trials. Apart from the severity and duration of their disease, the two populations differed in their use of concomitant levodopa therapy. Patients with early disease did not receive concomitant levodopa therapy during treatment with pramipexole; those with advanced Parkinson's disease all received concomitant levodopa treatment. Because these two populations may have differential risks for various adverse events, this section will, in general, present adverse-event data for these two populations separately.

Because the controlled trials performed during premarketing development all used a titration design, with a resultant confounding of time and dose, it was impossible to adequately evaluate the effects of dose on the incidence of adverse events.

Early Parkinson's Disease: In the three double-blind, placebo-controlled trials of patients with early Parkinson's disease, the most commonly observed adverse events (>5%) that were numerically more frequent in the group treated with MIRAPEX tablets were nausea, dizziness, somnolence, insomnia, constipation, asthenia, and hallucinations.

Approximately 12% of 388 patients with early Parkinson's disease and treated with MIRAPEX tablets who participated in the double-blind, placebo-controlled trials discontinued treatment due to adverse events compared with 11% of 235 patients who received placebo. The adverse events most commonly causing discontinuation of treatment were related to the nervous system (hallucinations [3.1% on MIRAPEX tablets vs 0.4% on placebo]; dizziness [2.1% on MIRAPEX tablets vs 1% on placebo]; somnolence [1.6% on MIRAPEX tablets vs 0% on placebo]; extrapyramidal syndrome [1.6% on MIRAPEX tablets vs 6.4% on placebo]; headache and confusion [1.3% and 1.0%, respectively, on Mirapex® (pramipexole dihydrochloride) tablets vs 0% on placebo]); and gastrointestinal system (nausea [2.1% on MIRAPEX tablets vs 0.4% on placebo]).

Adverse-event Incidence in Controlled Clinical Studies in Early Parkinson's Disease: This section lists treatment-emergent adverse events that occurred in the double-blind, placebo-controlled studies in early Parkinson's disease that were reported by 1% or more of patients treated with MIRAPEX tablets and were numerically more frequent than in the placebo group. In these studies, patients did not receive concomitant levodopa. Adverse events were usually mild or moderate in intensity.

The prescriber should be aware that these figures cannot be used to predict the incidence of adverse events in the course of usual medical practice where patient characteristics and other factors differ from those that prevailed in the clinical studies. Similarly, the cited frequencies cannot be compared with figures obtained from other clinical investigations involving different treatments, uses, and investigators. However, the cited figures do provide the prescribing physician with some basis for estimating the relative contribution of drug and nondrug factors to the adverse-event incidence rate in the population studied.

Treatment-emergent adverse events are listed by body system in order of decreasing incidence for MIRAPEX tablets (N=388) vs placebo (N=235), respectively. ***Body as a whole:*** asthenia (14% vs 12%), general edema (5% vs 3%), malaise (2% vs 1%), reaction unevaluable (2% vs 1%), fever (1% vs 0%). ***Digestive system:*** nausea (28% vs 18%), constipation (14% vs 6%), anorexia (4% vs 2%), dysphagia (2% vs 0%). ***Metabolic and nutritional system:*** peripheral edema (5% vs 4%), decreased weight (2% vs 0%). ***Nervous system:*** dizziness (25% vs 24%), somnolence (22% vs 9%), insomnia (17% vs 12%),

hallucinations (9% vs 3%), confusion (4% vs 1%), amnesia (4% vs 2%), hypesthesia (3% vs 1%), dystonia (2% vs 1%), akathisia (2% vs 0%), thinking abnormalities (2% vs 0%), decreased libido (1% vs 0%), myoclonus (1% vs 0%). ***Special senses:*** vision abnormalities (3% vs 0%). ***Urogenital system:*** impotence (2% vs 1%). Patients may have reported multiple adverse experiences during the study or at discontinuation; thus, patients may be included in more than one category.

Other events reported by 1% or more of patients with early Parkinson's disease and treated with Mirapex® (pramipexole dihydrochloride) tablets but reported equally or more frequently in the placebo group were infection, accidental injury, headache, pain, tremor, back pain, syncope, postural hypotension, hypertonia, depression, abdominal pain, anxiety, dyspepsia, flatulence, diarrhea, rash, ataxia, dry mouth, extrapyramidal syndrome, leg cramps, twitching, pharyngitis, sinusitis, sweating, rhinitis, urinary tract infection, vasodilation, flu syndrome, increased saliva, tooth disease, dyspnea, increased cough, gait abnormalities, urinary frequency, vomiting, allergic reaction, hypertension, pruritus, hypokinesia, increased creatine PK, nervousness, dream abnormalities, chest pain, neck pain, paresthesia, tachycardia, vertigo, voice alteration, conjunctivitis, paralysis, accommodation abnormalities, tinnitus, diplopia, and taste perversions.

In a fixed-dose study in early Parkinson's disease, occurrence of the following events increased in frequency as the dose increased over the range from 1.5 mg/day to 6 mg/day: postural hypotension, nausea, constipation, somnolence, and amnesia. The frequency of these events was generally 2-fold greater than placebo for pramipexole doses greater than 3 mg/day. The incidence of somnolence with pramipexole at a dose of 1.5 mg/day was comparable to that reported for placebo.

Advanced Parkinson's Disease: In the four double-blind, placebo-controlled trials of patients with advanced Parkinson's disease, the most commonly observed adverse events (>5%) that were numerically more frequent in the group treated with MIRAPEX tablets and concomitant levodopa were postural (orthostatic) hypotension, dyskinesia, extrapyramidal syndrome, insomnia, dizziness, hallucinations, accidental injury, dream abnormalities, confusion, constipation, asthenia, somnolence, dystonia, gait abnormality, hypertonia, dry mouth, amnesia, and urinary frequency.

Approximately 12% of 260 patients with advanced Parkinson's disease who received Mirapex® (pramipexole dihydrochloride) tablets and concomitant levodopa in the double-blind, placebo-controlled trials discontinued treatment due to adverse events compared with 16% of 264 patients who received placebo and concomitant levodopa. The events most commonly causing discontinuation of treatment were related to the nervous system [hallucinations [2.7% on MIRAPEX tablets vs 0.4% on placebo]; dyskinesia [1.9% on MIRAPEX tablets vs 0.8% on placebo]; extrapyramidal syndrome [1.5% on MIRAPEX tablets vs 4.9% on placebo]; dizziness [1.2% on MIRAPEX tablets vs 1.5% on placebo]; confusion [1.2% on MIRAPEX tablets vs 2.3% on placebo]); and cardiovascular system [postural [orthostatic] hypotension [2.3% on MIRAPEX tablets vs 1.1% on placebo]].

Adverse-event Incidence in Controlled Clinical Studies in Advanced Parkinson's Disease: This section lists treatment-emergent adverse events that occurred in the double-blind, placebo-controlled studies in advanced Parkinson's disease that were reported by 1% or more of patients treated with MIRAPEX tablets and were numerically more frequent than in the placebo group. In these studies, MIRAPEX tablets or placebo was administered to patients who were also receiving concomitant levodopa. Adverse events were usually mild or moderate in intensity.

The prescriber should be aware that these figures cannot be used to predict the incidence of adverse events in the course of usual medical practice where patient characteristics and other factors differ from those that prevailed in the clinical studies. Similarly, the cited frequencies cannot be compared with figures obtained from other clinical investigations involving different treatments, uses, and investigators. However, the cited figures do provide the prescribing physician with some basis for estimating the relative contribution of drug and nondrug factors to the adverse-event incidence rate in the population studied.

Treatment-emergent adverse events are listed by body system in order of decreasing incidence for MIRAPEX tablets (N=260) vs placebo (N=264), respectively. ***Body as a whole:*** accidental injury (17% vs 15%), asthenia (10% vs 8%), general edema (4% vs 3%), chest pain (3% vs 2%), malaise (3% vs 2%). ***Cardiovascular system:*** postural hypotension (53% vs 48%). ***Digestive system:*** constipation (10% vs 9%), dry mouth (7% vs 3%). ***Metabolic and nutritional system:*** peripheral edema (2% vs 1%), increased creatine PK (1% vs 0%). ***Musculoskeletal system:*** arthritis (3% vs 1%), twitching (2% vs 0%), bursitis (2% vs 0%), myasthenia (1% vs 0%). ***Nervous system:*** dyskinesia (47% vs 31%), extrapyramidal syndrome (28% vs 26%), insomnia (27% vs 22%), dizziness (26% vs 25%), hallucinations (17% vs 4%), dream abnormalities (11% vs 10%), confusion (10% vs 7%), somnolence (9% vs 6%), dystonia (8% vs 7%), gait abnormalities (7% vs 5%), hypertonia (7% vs 6%), amnesia (6% vs 4%), akathisia (3% vs 2%), thinking abnormalities (3% vs 2%), paranoid reaction (2% vs 0%), delusions (1% vs 0%), sleep disorders (1% vs 0%). ***Respiratory system:*** dyspnea (4% vs 3%), rhinitis (3% vs 1%), pneumonia (2% vs 0%). ***Skin and appendages:*** skin disorders (2% vs 1%). ***Special senses:*** accommodation abnormalities (4% vs 2%), vision abnormalities (3% vs 1%), diplopia (1% vs 0%). ***Urogenital system:*** urinary frequency (6% vs 3%), urinary tract infection (4% vs 3%), urinary incontinence (2% vs 1%). Patients may have reported multiple adverse experiences during the study or at discontinuation; thus, patients may be included in more than one category.

Other events reported by 1% or more of patients with advanced Parkinson's disease and treated with Mirapex® (pramipexole dihydrochloride) tablets but reported equally or more frequently in the placebo group were nausea, pain, infection, headache, depression, tremor, hypokinesia, anorexia, back pain, dyspepsia, flatulence, ataxia, flu syndrome, sinusitis, diarrhea, myalgia, abdominal pain, anxiety, rash, paresthesia, hypertension, increased saliva, tooth disorder, apathy, hypotension, sweating, vasodilation, vomiting, increased cough, nervousness, pruritus, hypesthesia, neck pain, syncope, arthralgia, dysphagia, palpitations, pharyngitis, vertigo, leg cramps, conjunctivitis, and lacrimation disorders.

Restless Legs Syndrome: MIRAPEX tablets for treatment of RLS have been evaluated for safety in 889 patients, including 427 treated for over six months and 75 for over one year.

The overall safety assessment focuses on the results of three double-blind, placebo-controlled trials, in which 575 patients with RLS were treated with MIRAPEX tablets for up to 12 weeks. The most commonly observed adverse events with MIRAPEX tablets in the treatment of RLS (observed in >5% of pramipexole-treated patients and at a rate at least twice that observed in placebo-treated patients) were nausea and somnolence. Occurrences of nausea and somnolence in clinical trials were generally mild and transient.

Approximately 7% of 575 patients treated with MIRAPEX tablets during the double-blind periods of three placebo-controlled trials discontinued treatment due to adverse events compared to 5% of 223 patients who received placebo. The adverse event most commonly causing discontinuation of treatment was nausea (1%).

This section lists treatment-emergent events that occurred in three double-blind, placebo-controlled studies in RLS patients that were reported by 2% or more of patients treated with MIRAPEX tablets and were numerically more frequent than in the placebo group.

The prescriber should be aware that these figures cannot be used to predict the incidence of adverse events in the course of usual medical practice where patient characteristics and other factors differ from those that prevailed in the clinical studies. Similarly, the cited frequencies cannot be compared with figures obtained from other clinical investigations involving different treatments, uses, and investigators. However, the cited figures do provide the prescribing physician with some basis for estimating the relative contribution of drug and nondrug factors to the adverse-event incidence rate in the population studied.

Treatment-emergent adverse events are listed by body system in order of decreasing incidence for MIRAPEX tablets (N=575) vs placebo (N=223), respectively. ***Gastrointestinal disorders:*** nausea (16% vs 5%), constipation (4% vs 1%), diarrhea (3% vs 1%), dry mouth (3% vs 1%). ***General disorders and administration site conditions:*** fatigue (9% vs 7%). ***Infections and infestations:*** influenza (3% vs 1%). ***Nervous system disorders:*** headache (16% vs 15%), somnolence (6% vs 3%). Patients may have reported multiple adverse experiences during the study or at discontinuation; thus, patients may be included in more than one category.

This section summarizes data for adverse events that appeared to be dose related in the 12-week fixed dose study. Dose related adverse events in a 12-week, double-blind, placebo-controlled, fixed dose study in Restless Legs Syndrome (occurring in 5% or more of all patients in the treatment phase) are listed by body system in order of decreasing incidence for MIRAPEX (0.25 mg [N=88]; 0.5 mg [N=80]; 0.75 mg [N=90]) vs placebo (n=86), respectively. ***Gastrointestinal disorders:*** nausea (11%; 19%; 27% vs 5%), diarrhea (3%; 1%; 7% vs 0%), dyspepsia (3%; 1%; 4% vs 7%). ***Infections and infestations:*** influenza (1%; 4%; 7% vs 1%). ***General disorders and administration site conditions:*** fatigue (3%; 5%; 7% vs 5%). ***Psychiatric disorders:*** insomnia (9%; 9%; 13% vs 9%), abnormal dreams (2%; 1%; 8% vs 2%). ***Respiratory, thoracic and mediastinal disorders:*** nasal congestion (0%; 3%; 6% vs 1%). ***Musculoskeletal and connective tissue disorders:*** pain in extremity (3%; 3%; 7% vs 1%).

Other events reported by 2% or more of RLS patients treated with Mirapex® (pramipexole dihydrochloride) tablets but equally or more frequently in the placebo group, were: vomiting, nasopharyngitis, back pain, pain in extremity, dizziness, and insomnia.

General

Adverse Events; Relationship to Age, Gender, and Race: Among the treatment-emergent adverse events in patients treated with MIRAPEX tablets, hallucination appeared to exhibit a positive relationship to age in patients with Parkinson's disease. Although no gender-related differences were observed in Parkinson's disease patients, nausea and fatigue, both generally transient, were more frequently reported by female than male RLS patients. Less than 4% of patients enrolled were non-Caucasian, therefore, an evaluation of adverse events related to race is not possible.

Other Adverse Events Observed During Phase 2 and 3 Clinical Trials: MIRAPEX tablets have been administered to 1620 Parkinson's disease patients and to 889 RLS patients in Phase 2 and 3 clinical trials. During these trials, all adverse events were recorded by the clinical investigators using terminology of their own choosing; similar types of events were grouped into a smaller number of standardized categories using MedDRA dictionary terminology. These categories are used in the listing below. Adverse events which are not listed above but occurred on at least two occasions (one occasion if the event was serious) in the 2509 individuals exposed to MIRAPEX tablets are listed below. The reported events below are included without regard to determination of a causal relationship to MIRAPEX tablets.

Blood and lymphatic system disorders: anemia, iron deficiency anemia, leukocytosis, leukopenia, lymphadenitis, lymphadenopathy, thrombocythaemia, thrombocytopenia. *Cardiac disorders:* angina pectoris, arrhythmia supraventricular, atrial fibrillation, atrioventricular block first degree, atrioventricular block second degree, bradycardia, bundle branch block, cardiac arrest, cardiac failure, cardiac failure congestive, cardiomegaly, coronary artery occlusion, cyanosis, extrasystoles, left ventricular failure, myocardial infarction, nodal arrhythmia, sinus arrhythmia, sinus bradycardia, sinus tachycardia, supraventricular extrasystoles, supraventricular tachycardia, tachycardia, ventricular fibrillation, ventricular extrasystoles, ventricular hypertrophy. *Congenital, familial and genetic disorders:* atrial septal defect, congenital foot malformation, spine malformation. *Ear and labyrinth disorders:* deafness, ear pain, hearing impaired, hypoacusis, motion sickness, vestibular ataxia. *Endocrine disorders:* goiter, hyperthyroidism, hypothyroidism. *Eye disorders:* amaurosis fugax, blepharitis, blepharospasm, cataract, dacryostenosis acquired, dry eye, eye hemorrhage, eye irritation, eye pain, eyelid edema, eyelid ptosis, glaucoma, keratitis, macular degeneration, myopia, photophobia, retinal detachment, retinal vascular disorder, scotoma, vision blurred, visual acuity reduced, vitreous floaters. *Gastrointestinal disorders:* abdominal discomfort, abdominal distension, aphthous stomatitis, ascites, cheilitis, colitis, colitis ulcerative, duodenal ulcer, duodenal ulcer hemorrhage, enteritis, eructation, fecal incontinence, gastric ulcer, gastric ulcer hemorrhage, gastritis, gastrointestinal hemorrhage, gastroesophageal reflux disease, gingivitis, haematemesis, haematochezia, hemorrhoids, hiatus hernia, hypochlorhydria, ileus, inguinal hernia, intestinal obstruction, irritable bowel syndrome, esophageal spasm, esophageal stenosis, esophagitis, pancreatitis, periodontitis, rectal hemorrhage, reflux esophagitis, tongue edema, tongue ulceration, toothache, umbilical hernia. *General disorders:* chest discomfort, chills, death, drug withdrawal syndrome, face edema, feeling cold, feeling hot, feeling jittery, gait disturbance, impaired healing, influenza-like illness, irritability, localized edema, edema, pitting edema, thirst. *Hepatobiliary disorders:* biliary colic, cholecystitis chronic, cholelithiasis. *Immune system disorders:* drug hypersensitivity. *Infections and infestations:* abscess, acute tonsillitis, appendicitis, bronchiolitis, bronchitis, bronchopneumonia, cellulitis, cystitis, dental caries, diverticulitis, ear infection, eye infection, folliculitis, fungal infection, furuncle, gangrene, gastroenteritis, gingival infection, herpes simplex, herpes zoster, hordeolum, intervertebral discitis, laryngitis, lobar pneumonia, nail infection, onychomycosis, oral candidiasis, orchitis, osteomyelitis, otitis externa, otitis media, paronychia, pyelonephritis, pyoderma, sepsis, skin infection, tonsillitis, tooth abscess, tooth infection, upper respiratory tract infection, urethritis, vaginal candidiasis, vaginal infection, viral infection, wound infection. *Injury, poisoning and procedural complications:* accidental falls, drug toxicity epicondylitis, road traffic accident, sunburn, tendon rupture. *Metabolism and nutrition disorders:* cachexia, decreased appetite, dehydration, diabetes mellitus, fluid retention, gout, hypercholesterolemia, hyperglycemia, hyperlipidemia, hyperuricemia, hypocalcemia, hypoglycemia, hypokalemia, hyponatremia, hypovitaminosis, increased appetite, metabolic alkalosis. *Musculoskeletal and connective tissue disorders:* bone pain, fasciitis, flank pain, intervertebral disc disorder, intervertebral disc protrusion, joint effusion, joint stiffness, joint swelling, monarthritis, muscle rigidity, muscle spasms, musculoskeletal stiffness, myopathy, myositis, nuchal rigidity, osteoarthritis, osteonecrosis, osteoporosis, polymyalgia, rheumatoid arthritis, shoulder pain, spinal osteoarthritis, tendonitis, tenosynovitis. *Neoplasms benign, malignant and unspecified:* abdominal neoplasm, adenocarcinoma, adenoma benign, basal cell carcinoma, bladder cancer, breast cancer, breast neoplasm, chronic lymphocytic leukemia, colon cancer, colorectal cancer, endometrial cancer, gallbladder cancer, gastric cancer, gastrointestinal neoplasm, hemangioma, hepatic neoplasm, hepatic neoplasm malignant, lip and/or oral cavity cancer, lung neoplasm malignant, lung cancer metastatic, lymphoma, malignant melanoma, melanocytic naevus, metastases to lung, multiple myeloma, oral neoplasm benign, neoplasm, neoplasm malignant, neoplasm prostate, neoplasm skin, neuroma, ovarian cancer, prostate cancer, prostatic adenoma, pseudo lymphoma, renal neoplasm, skin cancer, skin papilloma, squamous cell carcinoma, thyroid neoplasm, uterine leiomyoma. *Nervous system disorders:* ageusia, akinesia, anticholinergic syndrome, aphasia, balance disorder, brain edema, carotid artery occlusion, carpal tunnel syndrome, cerebral artery embolism, cerebral hemorrhage, cerebral infarction, cerebral ischemia, chorea, cognitive disorder, coma, convulsion, coordination abnormal, dementia, depressed level of consciousness, disturbance in attention, dizziness postural, dysarthria, dysgraphia, facial palsy, grand mal convulsion, hemiplegia, hyperaesthesia, hyperkinesia, hyperreflexia, hyporeflexia, hypotonia, lethargy, loss of consciousness, memory impairment, migraine, muscle contractions involuntary, narcolepsy, neuralgia, neuropathy, nystagmus, parosmia, psychomotor hyperactivity, sciatica, sedation, sensory disturbance, sleep phase rhythm disturbance, sleep talking, stupor, syncope vasovagal, tension headache. *Psychiatric disorders:* affect lability, aggression, agitation, bradyphrenia, bruxism, suicide, delirium, delusional disorder persecutory type, disorientation, dissociation, emotional distress, euphoric mood, hallucination auditory, hallucination visual, initial insomnia, libido increased, mania, middle insomnia, mood altered, nightmare, obsessive thoughts, obsessive-compulsive disorder, panic reaction, parasomnia, personality disorder, psychotic disorder, restlessness, sleep walking, suicidal ideation. *Renal and urinary disorders:* chromaturia, dysuria, glycosuria, hematuria, urgency, nephrolithiasis, neurogenic bladder, nocturia, oliguria, pollakiuria, proteinuria, renal artery stenosis, renal colic, renal cyst, renal failure, renal impairment, urinary retention. *Reproductive system and breast disorders:* amenorrhea, breast pain, dysmenorrhea, epididymitis, gynaecomastia, menopausal symptoms, menorrhagia, metrorrhagia, ovarian cyst, priapism, prostatitis, sexual dysfunction, uterine hemorrhage, vaginal discharge, vaginal hemorrhage. *Respiratory, thoracic and mediastinal disorders:* apnea, aspiration, asthma, choking, chronic obstructive pulmonary disease, dry throat, dysphonia, dyspnea exertional, epistaxis, haemoptysis, hiccups, hyperventilation, increased bronchial secretion, laryngospasm, nasal dryness, nasal polyps, obstructive airways disorder, pharyngolaryngeal pain, pleurisy, pneumonia aspiration, pneumothorax, postnasal drip, productive cough, pulmonary embolism, pulmonary edema, respiratory alkalosis, respiratory distress, respiratory failure, respiratory tract congestion, rhinitis allergic, rhinorrhea, sinus congestion, sleep apnoea syndrome, sneezing, snoring, tachypnea, wheezing. *Skin and subcutaneous tissue disorders:* acne, alopecia, cold sweat, dermal cyst, dermatitis, dermatitis bullous, dermatitis contact, dry skin, ecchymosis, eczema, erythema, hyperkeratosis, livedo reticularis, night sweats, periorbital edema, petechiae, photosensitivity allergic reaction, psoriasis, purpura, rash erythematous, rash maculo-papular, rash papular, rosacea, seborrhea, seborrheic dermatitis, skin burning sensation, skin discoloration, skin exfoliation, skin hyperpigmentation, skin hypertrophy, skin irritation, skin nodule, skin odor abnormal, skin ulcer, urticaria. *Vascular disorders:* aneurysm, angiopathy, arteriosclerosis, circulatory collapse, deep vein thrombosis, embolism, hematoma, hot flush, hypertensive crisis, lymphoedema, pallor, phlebitis, Raynaud's phenomenon, shock, thrombophlebitis, thrombosis, varicose vein.

Falling Asleep During Activities of Daily Living: Patients treated with Mirapex® (pramipexole dihydrochloride) tablets have reported falling asleep while engaged in activities of daily living, including operation of a motor vehicle which sometimes resulted in accidents (see bolded **WARNING**).

Post-Marketing Experience: In addition to the adverse events reported during clinical trials, the following adverse reactions have been identified during post-approval use of MIRAPEX tablets, primarily in Parkinson's disease patients. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure. Decisions to include these reactions in labeling are typically based on one or more of the following factors: (1) seriousness of the reaction, (2) frequency of reporting, or (3) strength of causal connection to pramipexole tablets. Similar types of events were grouped into a smaller number of standardized categories using the MedDRA dictionary: abnormal behavior, abnormal dreams, accidents (including fall), blackouts, fatigue, hallucinations (all kinds), headache, hypotension (including postural hypotension), increased eating (including binge eating, compulsive eating, and hyperphagia), libido disorders (including increased and decreased libido, and hypersexuality), pathological gambling, syncope, and weight increase.

DRUG ABUSE AND DEPENDENCE

Pramipexole is not a controlled substance. Pramipexole has not been systematically studied in animals or humans for its potential for abuse, tolerance, or physical dependence. However, in a rat model on cocaine self-administration, pramipexole had little or no effect.

OVERDOSAGE

There is no clinical experience with massive overdosage. One patient, with a 10-year history of schizophrenia, took 11 mg/day of pramipexole for 2 days in a clinical trial to evaluate the effect of pramipexole in schizophrenic patients. No adverse events were reported related to the increased dose. Blood pressure remained stable although pulse rate increased to between 100 and 120 beats/minute. The patient withdrew from the study at the end of week 2 due to lack of efficacy.

There is no known antidote for overdosage of a dopamine agonist. If signs of central nervous system stimulation are present, a phenothiazine or other butyrophenone neuroleptic agent may be indicated; the efficacy of such drugs in reversing the effects of overdosage has not been assessed. Management of overdose may require general supportive measures along with gastric lavage, intravenous fluids, and electrocardiogram monitoring.

ANIMAL TOXICOLOGY

Retinal Pathology in Albino Rats: Pathologic changes (degeneration and loss of photoreceptor cells) were observed in the retina of albino rats in the 2-year carcinogenicity study with pramipexole. These findings were first observed during week 76 and were dose dependent in animals receiving 2 or 8 mg/kg/day (plasma AUCs equal to 2.5 and 12.5 times the AUC in humans that received 1.5 mg TID). In a similar study of pigmented rats with 2 years' exposure to pramipexole at 2 or 8 mg/kg/day, retinal degeneration was not diagnosed. Animals given drug had thinning in the outer nuclear layer of the retina that was only slightly greater than that seen in control rats utilizing morphometry.

Investigative studies demonstrated that pramipexole reduced the rate of disk shedding from the photoreceptor rod cells of the retina in albino rats, which was associated with enhanced sensitivity to the damaging effects of light. In a comparative study, degeneration and loss of photoreceptor cells occurred in albino rats after 13 weeks of treatment with 25 mg/kg/day of pramipexole (54 times the highest clinical dose on a mg/m^2 basis) and constant light (100 lux) but not in pigmented rats exposed to the same dose and higher light intensities (500 lux). Thus, the retina of albino rats is considered to be uniquely sensitive to the damaging effects of pramipexole and light. Similar changes in the retina did not occur in a 2-year carcinogenicity study in albino mice treated with 0.3, 2, or 10 mg/kg/day (0.3, 2.2 and 11 times the highest clinical dose on a mg/m^2 basis). Evaluation of the retinas of monkeys given 0.1, 0.5, or 2.0 mg/kg/day of pramipexole (0.4, 2.2, and 8.6 times the highest clinical dose on a mg/m^2 basis) for 12 months and minipigs given 0.3, 1, or 5 mg/kg/day of pramipexole for 13 weeks also detected no changes.

The potential significance of this effect in humans has not been established, but cannot be disregarded because disruption of a mechanism that is universally present in vertebrates (i.e., disk shedding) may be involved.

Fibro-osseous Proliferative Lesions in Mice: An increased incidence of fibro-osseous proliferative lesions occurred in the femurs of female mice treated for 2 years with 0.3, 2.0, or 10 mg/kg/day (0.3, 2.2, and 11 times the highest clinical dose on a mg/m^2 basis). Lesions occurred at a lower rate in control animals. Similar lesions were not observed in male mice or rats and monkeys of either sex that were treated chronically with pramipexole. The significance of this lesion to humans is not known.

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MRLS-BS

Boehringer Ingelheim

Mirapex®
pramipexole dihydrochloride

Continuing Medical Education Information

Learning Objectives

As a result of participating in this activity, the attendee should be better able to:

- Describe the pathophysiology and neurobiology of Parkinson's disease and other Movement Disorders;
- Discuss the diagnostic approaches and tools available for Parkinson's disease and other Movement Disorders;
- Discuss the pharmacological and non-pharmacological treatment options available for Parkinson's disease and other Movement Disorders.

Availability of CME Credits

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

The Scientific Program of the 11th International Congress of Parkinson's Disease and Movement Disorders has been reviewed and approved for Category 1 credit toward the American Medical Association (AMA) Physician's Recognition Award. The *Movement* Disorder Society is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education to physicians.

The *Movement* Disorder Society designates this educational activity for a maximum of 37 *AMA PRA Category 1 Credits*™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Requesting CME Credits/Certificates of Attendance

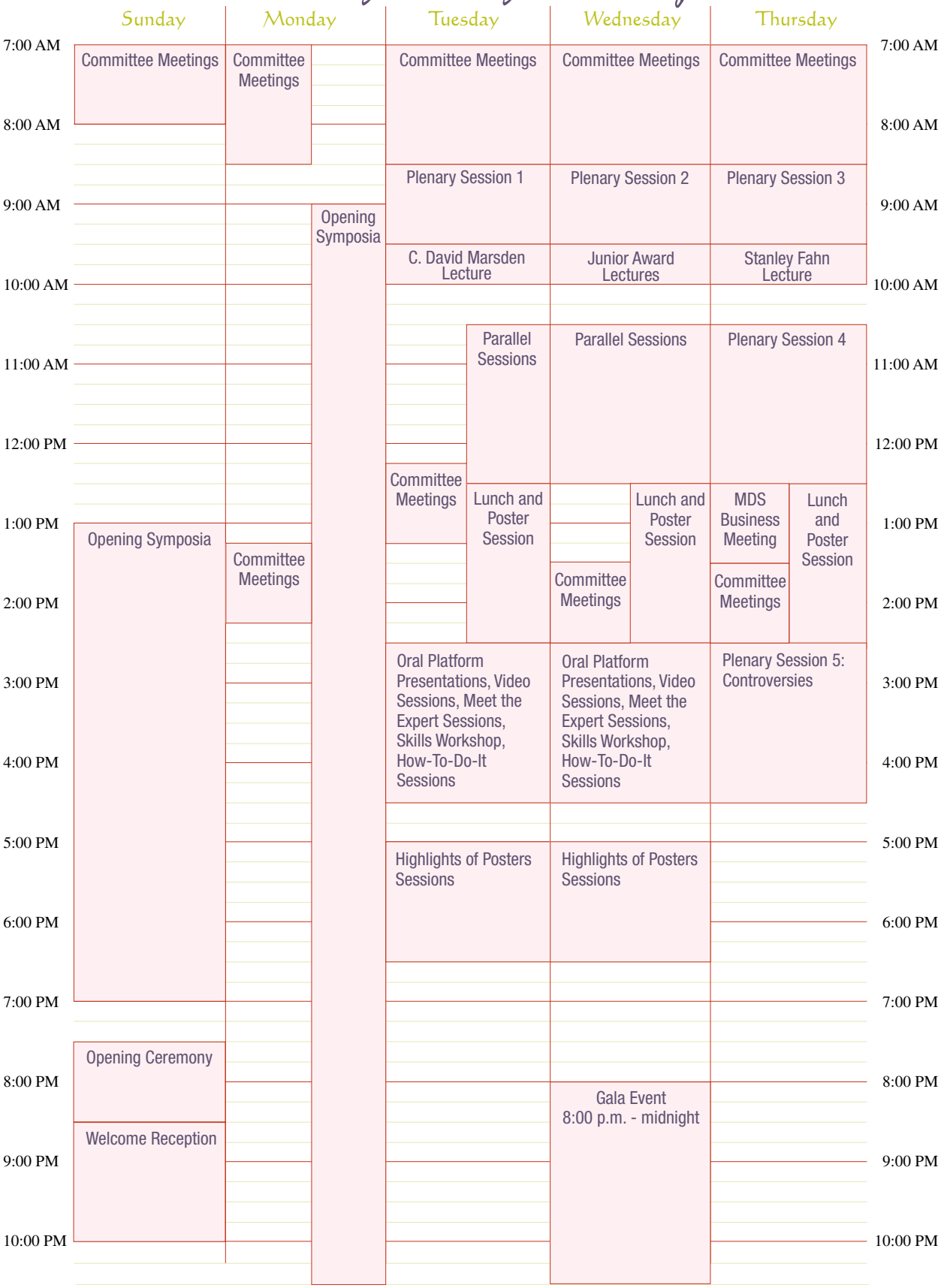
To receive a CME Certificate or Certificate of Attendance authenticating participation in this educational activity, International Congress participants must complete and submit an online CME Request Form following their participation in the International Congress. To do so, participants may visit the CME Kiosks near the Registration Area, available on Wednesday, June 6, and Thursday, June 7. Participants may also visit the Web site from their own computer by logging on to www.movementdisorders.org/congress/congress07/cme. CME Certificates and Certificates of Attendance can be printed directly from the Kiosks onsite or your personal computer, or e-mailed to yourself from the CME Kiosks.

Participants will need their MDS ID Number and password to claim credit. This information can be found on the bottom of your registration confirmation form (found in your registration packet). It will also be e-mailed to all International Congress participants upon the completion of the 11th International Congress.

Target Audience

The target audience of the 11th 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

11th International Congress Program-at-a-Glance



Improved quality-of-life and advanced Parkinson's Disease don't normally belong in the same sentence.

Now they can.[1]

Duodopa

Duodopa® contains 1 ml contains 20 mg levodopa and 5 mg carbidopa monohydrate.100 ml contain 2000 mg levodopa and 500 mg carbidopa monohydrate. **Pharmaceutical form:** intestinal gel. **Therapeutic indications:** Treatment of advanced levodopa-responsive Parkinson's disease with severe motor fluctuations and hyper-/dyskinesia when available combinations of Parkinson medicinal products have not given satisfactory results. **Posology and method of administration:** the gel should be administered with a portable pump directly into the duodenum or upper jejunum by a permanent tube via percutaneous endoscopic gastrostomy with an outer transabdominal tube and an inner intestinal tube. A temporary nasoduodenal tube is recommended to find out if the patient responds favourably to this method of treatment. **Dosage:** the total dose/day of Duodopa is composed of three individually adjusted doses: the morning bolus dose, the continuous maintenance dose and extra bolus doses. **Morning dose:** The morning bolus dose is administered by the pump to rapidly achieve the therapeutic dose level (within 10-30 minutes). The total morning dose should not exceed 15 ml (300 mg levodopa). **Continuous maintenance dose:** The maintenance dose is adjustable in steps of 2 mg/hour (0.1 ml/hour). The continuous maintenance dose is adjusted individually. It should be kept within a range of 1-10 ml/hour (20-200 mg levodopa/hour). **Extra bolus doses:** To be given as required if the patient becomes hypokinetic during the day. The extra dose should be adjusted individually. Treatment must monitored. **Contraindications:** hypersensitivity to levodopa, carbidopa or any of the excipients; severe liver and renal insufficiency; severe heart failure; severe cardiac arrhythmia; acute stroke. **Special warnings and precautions for use:** Duodopa should be administered with caution to patients with severe cardiovascular or pulmonary disease, bronchial asthma, renal, hepatic or endocrine disease, or history of peptic ulcer disease or of convulsions. In patients with a history of myocardial infarction who have residual atrial nodal or ventricular arrhythmias, cardiac function should be monitored with particular care during the period of initial dosage adjustments. All patients treated with Duodopa should be monitored carefully.. Patients with past or current psychosis and chronic wide-angle glaucome can be treated with caution. Levodopa has been associated with somnolence and episodes of sudden sleep onset in patients with Parkinson's disease and caution should therefore be exercised when driving and operating machines. Previous surgery in the upper part of the abdomen may lead to difficulty in performing gastrostomy or jejunostomy. **Interaction with other medicinal products and other forms of interaction:** Caution is needed in concomitant administration of Duodopa with the following medicinal products: antihypertensives, antidepressants, anticholinergics, COMT ihibitors, some antipsychotics and benzodiazepines. Duodopa can be taken concomitantly with the recommended dose of an MAO inhibitor, which is selective for MAO type B (for instance selegiline-HC1). Concomitant use of selegiline and levodopa-carbidopa has been associated with serious orthostatic hypotension. Amantadine has a synergic effect with levodopa and may increase levodopa related adverse events. Sympathicomimetics may increase cardiovascular adverse events related to levodopa. Levodopa forms a chelate with iron in the gastrointestinal tract leading to reduced absorption of levodopa. As levodopa is competitive with certain amino acids, the absorption of levodopa can be disturbed in patients who are on a protein rich diet. The effect of administration of antacids and Duodopa on the bioavailability of levodopa has not been studied. **Pregnancy:** Duodopa should not be used during pregnancy unless the benefits for the mother outweigh the possible risks to the foetus. **Lactation:** Levodopa is excreted in the breast milk. It is unknown whether carbidopa is excreted in human breast milk. Duodopa should not be used during breast-feeding. **Effects on ability to drive and use machines:** Caution should be exercised when driving or using machines. **Undesirable effects:** Undesirable effects that occur frequently with levodopa/carbidopa are those due to the central neuropharmacological activity of dopamine. These reactions can usually be diminished by levodopa dosage reduction. **The device:** Complications with the devices may occur, e.g. connector leakage and dislocation of the intestinal tube. Dislocation of the intestinal tube backwards into the stomach leads to reappearance of motor fluctuations. In general, relocation of the tube can be done using a guide-wire to steer the tube into the duodenum under fluoroscopy. Occlusion, kinks, or knots of the intestinal tube lead to high pressure signals from the pump. Occlusions are usually remedied by flushing the tube with tap water; kinking, knotting, or a tube displacement may need readjustment of the tubing. The stoma usually heals without complications. However, abdominal pain, infection and leakage of gastric fluid may occur shortly after surgery; it is rarely a problem long-term. Reported complications include wound infection (the most common complication) and peritonitis. Local infections around the stoma are usually treated conservatively with a disinfectant. Overdose: Most prominent clinical symptoms of an overdose with levodopa/ carbidopa are dystonia and dyskinesia. Blepharospasm can be an early sign of overdose. The treatment of an acute overdose of Duodopa is in general the same as that of an acute overdose of levodopa. Electrocardiographic monitoring should be used and the patient observed carefully for the development of cardiac arrhythmias; if necessary an appropriate antiarrhythmic therapy should be given. The possibility that the patient took other medicinal products together with Duodopa should be taken into consideration. To date experiences with dialysis have not been reported, therefore its value in the treatment of overdose is unknown. **Shelf life:** 15 weeks. **Special precautions for storage:** store in a refrigerator (2°C-8°C).Keep the cassette in the outer carton in order to protect from light. The marketing holder of the product is Solvay Pharmaceuticals. **For further information consult www.solvaypharmaceuticals.com**

SOLVAY

[1] *Nyholm D. et al. Duodenal levodopa infusion monotherapy versus oral polypharmacy in advanced Parkinson's disease. Neurology 2005; 64: 216-223.*

Scientific Session Definitions

Opening Symposia: These sessions will provide the latest information regarding research and treatment options for Parkinson's disease and other Movement Disorders. Planned by a subcommittee of the Congress Scientific Program Committee, these sessions are supported through educational grants from Industry Supporters and are didactic in presentation format with time allotted for discussion. Continuing Medical Education credits are offered for these sessions.

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

Plenary Sessions: Designed to bring together a large audience by incorporating all International Congress attendees, these sessions will provide a broad overview of the latest clinical and basic science research findings and state-of-the-art information.

Video Sessions: Designed to provide a broad overview of related Movement Disorders, the video sessions will focus on the phenomenology covering the many different kinds of Movement Disorders affecting the population today.

Meet the Expert Sessions: These interactive sessions provide attendees the opportunity to bring their case studies analysis and discussions in a smaller setting. These sessions are designed to cover treatment and management of Movement Disorders through the discussion of relevant real-life cases brought for peer review and recommendation. Attendees will be invited to share their cases at the session.

Skills Workshops: This clinic-based training session provides an educational illustration of treatment procedures through live demonstrations utilizing patients and proper equipment to further develop practitioners' skills and knowledge within the field of treatment of Movement Disorders.

Controversies: This Plenary Session is designed to bring together a larger audience by incorporating all International Congress attendees. Content is prepared to stimulate interest and debate among a panel of pre-selected experts. Views from several angles will be addressed as discussion of pre-selected "hot" topics will be open for debate among the panelists.

Highlights of Poster Sessions: These sessions are designed to highlight the top-ranking abstracts of the International Congress. Session content will be divided into two categories for review of the abstracts: Clinical and Basic. The Chair of each category will select several interesting abstracts and obtain one or more summary slides of their abstracts for use in these sessions.

How-To-Do-It Sessions: These sessions are practical interactive sessions focusing on illustration and will incorporate what clinicians use, how to use it, and what they watch for.

Scientific Program Schedule for 2007 Istanbul Congress

Sunday, June 03, 2007

12:00 PM **Lunch will be provided**
Location: Halic Foyer

1:00 PM to 3:00 PM

2010 **Opening Symposium: Benefits and issues in the use of long lasting dopamine agonists**
Location: Anadolu Auditorium
Chair: Howard Hurtig
Philadelphia, PA, USA
Chair: Werner Poewe
Innsbruck, Austria

1:00 PM **Long acting agonists - Is there an advantage?**
Oscar S. Gershanik
Buenos Aires, Argentina

1:30 PM **Combination therapy - Is there a role?**
Wolfgang H. Oertel
Marburg, Germany

2:00 PM **Update on cardiac valvulopathy with the use of dopamine agonists**
Yoshikuni Mizuno
Tokyo, Japan

2:30 PM **Panel Discussion**

3:00 PM to 4:00 PM

2011 **Opening Symposium: Imaging the dopamine system**
Supported by an educational grant from GE Healthcare
Location: Marmara Room
Chair: Andrew J. Lees
London, United Kingdom

3:00 PM **Imaging the dopamine system - Techniques and methods**
Joel S. Perlmutter
St. Louis, MO, USA

3:30 PM **Imaging the dopamine system in the diagnosis of Parkinson's disease**
Kenneth Marek
New Haven, CT, USA

4:00 PM to 5:00 PM

2012 **Opening Symposium: Issues in cognitive dysfunction in Parkinson's disease**
Supported by an educational grant from Merck Serono
Location: Marmara Room
Chair: Fabrizio Stocchi
Roma, Italy

4:00 PM **Cognitive dysfunction in Parkinson's disease**
David John Burn
Newcastle upon Tyne, United Kingdom

4:30 PM **Treatment of cognitive dysfunction and dementia in Parkinson's disease**
Murat Emre
Capa Istanbul, Turkey

5:00 PM to 7:00 PM

2013 **Opening Symposium: Levodopa - Still the one**
Supported by an educational grant from Novartis Pharma/Orion Pharma
Location: Anadolu Auditorium
Chair: Niall P. Quinn
London, United Kingdom
Chair: Philip D. Thompson
Adelaide, Australia

5:00 PM **History of levodopa**
Andrew J. Lees
London, United Kingdom

5:30 PM **Levodopa - Advantages and disadvantages in the treatment of Parkinson's disease**
John G. Nutt
Portland, OR, USA

6:00 PM **Role of COMT inhibitors**
Eduardo Tolosa
Barcelona, Spain

6:30 PM **New concepts in the use of levodopa**
C. Warren Olanow
New York, NY, USA

7:30 PM to 10:00 PM

Opening Ceremony
Location: Anadolu Auditorium
Welcome Reception
Location: Rumeli Gardens

Monday, June 04, 2007

8:00 AM Breakfast will be provided
Location: Halic Foyer

9:00 AM to 10:00 AM

3015 **Opening Symposium: Transdermal therapy for Parkinson's disease**
Supported by an educational grant from Schwarz Pharma AG
Location: Marmara Room
Chair: Yoshikuni Mixuno
Tokyo, Japan

9:00 AM Patch technology in the treatment of Parkinson's disease
Peter LeWitt
Southfield, MI, USA

9:20 AM Transdermal administration of dopaminergic agents
Werner Poewe
Innsbruck, Austria

9:40 AM Panel Discussion

10:00 AM to 2:00 PM

3016 **Opening Symposium: A decade of non-ergot dopamine agonists**
Supported by an educational grant from Boehringer Ingelheim
Location: Anadolu Auditorium
Chair: C. Warren Olanow
New York, NY, USA
Chair: Matthew B. Stern
Philadelphia, PA, USA

10:00 AM Dopamine systems - Anatomy
Yoland Smith
Atlanta, GA, USA

10:30 AM Dopamine systems in Parkinson's disease - What goes wrong?
Anthony A. Grace
Pittsburgh, PA, USA

11:00 AM Why are the dopamine neurons vulnerable in Parkinson's disease
Etienne C. Hirsch
Paris, France

11:30 AM Dopamine agonists - Their development and history
Donald B. Calne
Vancouver, BC, Canada

12:00 PM Lunch will be provided
Location: Halic Foyer

12:30 PM Dopamine agonists and the treatment of Parkinson's disease - Motor complications and neuroprotection
Anthony H.V. Schapira
London, United Kingdom

1:00 PM Dopamine agonists and Restless Legs Syndrome
Claudia M. Trenkwalder
Kassel, Germany

1:30 PM Dopamine agonists - Adverse effects, new considerations, sleep, impulsive disorders, edema, heart valve
Janis Miyasaki
Toronto, ON, Canada

2:00 PM to 3:00 PM

3017 **Opening Symposium: Botulinum toxin - Clinical indications in the treatment of dystonia 2007**
Supported by an educational grant from Allergan, Ltd.
Location: Marmara Room
Chair: Cynthia L. Comella
Chicago, IL, USA

2:00 PM What factors influence outcome following botulinum toxin therapy?
Giovanni Abbruzzese
Genova, Italy

2:30 PM Safety and efficacy studies with different botulinum toxin formulations
Daniel Tarsy
Boston, MA, USA

Monday, June 04, 2007

3:00 PM to 4:00 PM

3018 Opening Symposium: Issues in the management of Parkinson's disease

Supported by an educational grant from Teva Pharmaceutical Industries, Ltd. And H. Lundbeck A/S

Location: Marmara Room

Chair: Anthony E. Lang
Toronto, ON, Canada

3:00 PM Attempts to obtain neuroprotection in Parkinson's disease
C. Warren Olanow
New York, NY, USA

3:20 PM Issues to consider in the early management of Parkinson's disease
Olivier Rascol
Toulouse, France

3:40 PM Issues to consider in the management of moderate to advanced Parkinson's disease
Matthew B. Stern
Philadelphia, PA, USA

4:00 PM to 6:00 PM

3019 Opening Symposium: Long acting dopamine agonists

Supported by an educational grant from GlaxoSmithKline UK Limited

Location: Anadolu Auditorium

Chair: David J. Brooks
London, United Kingdom

Chair: Ray L. Watts
Birmingham, AL, USA

4:00 PM Importance of compliance in the management of Parkinson's disease
Donald Grosset
Glasgow, United Kingdom

4:30 PM Rationale and clinical results for a long acting dopaminergic therapy in Parkinson's disease
Ray L. Watts
Birmingham, AL, USA

5:00 PM Long term results and future opportunities
Robert Hauser
Tampa, FL, USA

5:30 PM Panel Discussion

6:00 PM to 7:00 PM Dinner will be provided

Location: Halic Foyer

7:00 PM to 8:00 PM

3020 Opening Symposium: Manipulating the dopamine system

Supported by an educational grant from Valeant Pharmaceuticals

Location: Anadolu Auditorium

Chair: Eldad Melamed
Petah Tiqva, Israel

7:00 PM MAO-B-zydis delivery of selegiline - Current status
Kapil D. Sethi
Augusta, GA, USA

7:30 PM COMT - Current status of tolcapone
Wolfgang Oertel
Marburg, Germany

8:00 PM to 9:00 PM

3021 Opening Symposium: Infusion therapies

Supported by an educational grant from Solvay Pharmaceuticals GmbH

Location: Marmara Room

Chair: Murat Emre
Capa Istanbul, Turkey

8:00 PM CDS
Fabrizio Stocchi
Roma, Italy

8:30 PM Duodopa
To be announced

9:00 PM to 10:00 PM

3022 Opening Symposium: Surgical therapy for Parkinson's disease

Supported by an educational grant from Medtronic, Inc.

Location: Anadolu Auditorium

Chair: Alim L. Benabid
Grenoble, France

9:00 PM Candidates for DBS - Indications and contraindications
Paul Krack
Grenoble, France

9:30 PM DBS for Parkinson's disease - Long term motor and neurobehavioral outcomes
Anthony E. Lang
Toronto, ON, Canada

Tuesday, June 05, 2007

8:30 AM to 10:00 AM

4051 Plenary Session 1

Location: Anadolu Auditorium

Chair: Murat Emre
Capa Istanbul, Turkey

Chair: Anthony E. Lang
Toronto, Canada

8:30 AM Mechanisms of neurodegeneration in Parkinson's disease
Serge Przedborski
New York, NY, USA

9:00 AM Imaging of neurodegeneration in Parkinson's disease
David J. Brooks
London, United Kingdom

9:30 AM C. David Marsden Lecture: Evolution of MSA as an entity
Location: Anadolu Auditorium
Niall P. Quinn
London, United Kingdom

10:30 AM to 12:30 PM

4101 Parallel Session: Genetics of Parkinson's disease

Location: Topkapi A

Chair: Thomas Gasser
Tübingen, Germany

Co-Chair: Enza Maria Valente
Rome, Italy

10:30 AM The dominant
Vincenzo Bonifati
Rotterdam, Netherlands

11:00 AM The recessive
Matthew J. Farrer
Jacksonville, FL, USA

11:30 AM The complex
Thomas Gasser
Tübingen, Germany

12:00 PM Discussion

4102 Parallel Session: Clinical trials in Parkinson's disease

Location: Anadolu Auditorium

Chair: Christopher G. Goetz
Chicago, IL, USA

Co-Chair: To be announced

10:30 AM Outcome measures for disease progression
Joel Perlmutter
St. Louis, MO, USA

11:00 AM The placebo effect in PD trials
Christopher G. Goetz
Chicago, IL, USA

11:30 AM Clinical trials and drug development in PD - Current needs and regulatory road blocks
Cristina Sampaio
Lisboa, Portugal

12:00 PM Discussion

4103 Parallel Session: Parkinson's disease: Outcome measures and scales

Location: Mini-Auditorium

Chair: Pablo Martinez-Martín
Madrid, Spain

Co-Chair: Ergun Uc
Iowa City, IA, USA

10:30 AM Why should we switch from the old to the new UPDRS?
Pablo Martinez-Martín
Madrid, Spain

11:00 AM Which imaging markers predict the progression of Parkinson's disease?
Philippe Remy
Creteil Cedex, France

11:30 AM Non-motor scales of Parkinson's disease
K. Ray Chaudhuri
London, United Kingdom

12:00 PM Discussion

4104 Parallel Session: Movement Disorders surgery meets psychiatry

Location: Dolmabahce A

Chair: Andres Lozano
Toronto, ON, Canada

Co-Chair: Cenk Akbostanci
Ankara, Turkey

10:30 AM Cognitive and psychiatric aspects of Parkinson's disease surgery
Paul Krack
Grenoble, France

11:00 AM Surgery for Tourettes and OCD
Virlee Visser-Vandewalle
Maastricht, Netherlands

11:30 AM Other emerging indications
Thomas Schlaepfer
Baltimore, MD, USA

12:00 PM Discussion

Tuesday, June 05, 2007

4105 Parallel Session: What do the basal ganglia do?

Location: Halic Room

Chair: John C. Rothwell
London, United Kingdom
Co-Chair: Jose Martin Rabey
Zerifin, Israel

10:30 AM Motor functions
John C. Rothwell
London, United Kingdom

11:00 AM Cognitive functions
Peter L. Strick
Pittsburgh, PA, USA

11:30 AM Limbic functions
Jose Martin Rabey
Zerifin, Israel

12:00 PM Discussion

4106 Parallel Session: Facial Movement Disorders

Location: Dolmabahce B

Chair: Alfredo Berardelli
Roma, Italy
Co-Chair: Joseph Jankovic
Houston, TX, USA

10:30 AM Functional organization of facial movements
Robert Morecraft
Vermillion, SD, USA

11:00 AM Clinical aspects and pathophysiology of cranial dystonia
Alfredo Berardelli
Roma, Italy

11:30 AM Non-dystonic involuntary facial movements
Philip D. Thompson
Adelaide, Australia

12:00 PM Discussion

4107 Parallel Session: Paroxysmal Movement Disorders

Location: Dolmabahce C

Chair: Kailash Bhatia
London, United Kingdom
Co-Chair: Mitsutoshi Yamamoto
Takamatsu, Japan

10:30 AM Ion channel disorders as a model for paroxysmal or episodic neurologic phenomena
Dimitri M. Kullman
London, United Kingdom

11:00 AM The episodic ataxias
Kailash Bhatia
London, United Kingdom

11:30 AM The paroxysmal dyskinesias
Meltem Demirkiran
Adana, Turkey

12:00 PM Discussion

4108 Parallel Session: Current treatment of Parkinson's disease: Motor symptoms – Teaching Course

Location: Marmara Room

Chair: Oksana Suchowersky
Calgary, AB, Canada
Co-Chair: Fabrizio Stocchi
Roma, Italy

10:30 AM When to start treatment?
Anthony H.V. Schapira
London, United Kingdom

11:00 AM Initial treatment in mild Parkinson's disease
Oksana Suchowersky
Calgary, AB, Canada

11:30 AM Treatment of moderate to severe Parkinson's disease
Fabrizio Stocchi
Roma, Italy

12:00 PM Discussion

4109 Parallel Session: Intersection of sleep and Movement Disorders: Evaluation and treatment - Teaching Course

Location: Topkapi B

Chair: Cynthia L. Comella
Chicago, IL, USA
Co-Chair: Alesandro Iranzo de Riquer
Barcelona, Spain

10:30 AM REM sleep behavior disorder
Carlos Schenck
Minneapolis, MN, USA

11:00 AM Restless Leg Syndrome/PLMS
Richard Allen
Baltimore, MD, USA

11:30 AM Disorders of sleep in Parkinson's disease
Cynthia L. Comella
Chicago, IL, USA

12:00 PM Discussion

Tuesday, June 05, 2007

Poster Presentations

Admission to this session is by delegate name badge. No ticket is required for admission to Poster Presentations.

Poster Session 1
Location: Lower Level, Rumeli Hall

Poster Viewing: 9:00 AM - 4:00 PM
Authors Present 12:30 PM - 2:30 PM
Poster Numbers: 33-345 and 683

2:30 PM to 4:30 PM

4201 Skills Workshop: DBS - Basic programming challenges and target identification
Location: Mini-Auditorium
Satoshi Goto
Tokushima City, Japan
Jens Volkmann
Kiel, Germany
Jonathan O. Dostrovsky
Toronto, ON, Canada

4202 Skills Workshop: Botulinum toxin - Basic techniques and special applications
Location: Dolmabahce A
Raif Çakmur
Izmir, Turkey
Dirk W. Dressler
Rostock, Germany

4301 Video Session: Movement Disorders functional surgery - Unique complications and responses
Location: Dolmabahce B
Boulos-Paul W. Bejjani
Byblos, Lebanon
Patricia Limousin-Dowsey
London, United Kingdom

4302 Video Session: Uncommon hyperkinetic Movement Disorders
Location: Anadolu Auditorium
Kailash P. Bhatia
London, United Kingdom
Kapil D. Sethi
Augusta, GA, USA

4401 Meet the Expert Session: Management of Parkinson's disease: Case presentations
Location: Topkapi A
Eldad Melamed
Petah Tiqva, Israel
Eduardo Tolosa
Barcelona, Spain

4402 Meet the Expert Session: Focal dystonias
Location: Dolmabahce C
Alberto Albanese
Milano, Italy
Francisco Eduardo C. Cardoso
Belo Horizonte, Brazil

4601 Oral Platform Presentations 1
Location: Marmara Room
Chair: Daniel Tarsy
Boston, MA, USA
Chair: John Hardy
Bethesda, MD, USA

4602 Oral Platform Presentations 2
Location: Halic Room
Chair: Carlo Colosimo
Rome, Italy
Chair: Erik Ch. Wolters
Amsterdam, The Netherlands

4701 How-To-Do-It Session: How to examine Movement Disorder patients
Location: Topkapi B
Roger Barker
Cambridge, United Kingdom
Pierre Pollak
Grenoble, France

5:00 PM to 6:30 PM

4901 Highlights of Poster Sessions 1-Basic
Location: Anadolu Auditorium
Chair: Rosario Luquin
Pamplona, Spain
Chair: Eldad Melamed
Petah Tiqva, Israel

4902 Highlights of Poster Sessions 2-Clinical
Location: Marmara Room
Chair: Piu Chan
Beijing, China
Chair: David J. Brooks
London, United Kingdom

Wednesday, June 06, 2007

8:30 AM to 10:00 AM

5051 Plenary Session: Treatment of Parkinson's disease

Location: Anadolu Auditorium

Chair: Joseph Jankovic
Houston, TX, USA
Chair: Eduardo Tolosa
Barcelona, Spain

8:30 AM Disease modification: Pipeline or pipe dream?
Olivier Rascol
Toulouse, France

8:50 AM What's new in the treatment of Parkinson's disease?
Anthony E. Lang
Toronto, ON, Canada

9:10 AM What's next in the treatment of Parkinson's disease?
Werner Poewe
Innsbruck, Austria

9:30 AM Junior Award Lectures

Location: Anadolu Auditorium, First Floor, Istanbul Convention and Exhibition Centre

Chairs: Joseph Jankovic
Houston, TX, USA
Eduardo Tolosa
Barcelona, Spain

10:30 AM to 12:30 PM

5101 Parallel Session: Update on the molecular pathogenesis and protein interactions in Parkinson's disease

Location: Anadolu Auditorium

Chair: Valina Dawson
Baltimore, MD, USA
Co-Chair: Serge Przedborski
New York, NY, USA

10:30 AM Synuclein and protein aggregation
Leonidas Stefanis
Papagou, Greece

11:00 AM The bulky parkinsonian kinase LRRK2
Valina Dawson
Baltimore, MD, USA

11:30 AM PINK1, a mitochondrial kinase
Enza Maria Valente
Rome, Italy

12:00 PM Discussion

5102 Parallel Session: Spasticity and spastic paraplegia

Location: Dolmabahce A

Chair: Alexandra Durr
Paris, France
Co-Chair: Philip D. Thompson
Adelaide, Australia

10:30 AM Phenotypes and genotypes of Hereditary Spastic Paraplegia (HSP)
Alexandra Durr
Paris, France

11:00 AM The role of axonal transport in the pathogenesis of HSP
Rebeca Schüle
Tübingen, Germany

11:30 AM Update on the pathophysiology and management of spasticity
Reiner Benecke
Rostock, Germany

12:00 PM Discussion

5103 Parallel Session: Lower body parkinsonism and gait disorders

Location: Halic Room

Chair: Bastiaan R. Bloem
Nijmegen, Netherlands
Co-Chair: Nir Giladi
Tel Aviv, Israel

10:30 AM Motor and cognitive mechanisms of gait and its disorders
Bastiaan R. Bloem
Nijmegen, Netherlands

11:00 AM Vascular parkinsonism
Jan C.M. Zijlmans
Breda, Netherlands

11:30 AM Pathophysiology and treatment of Idopathic NPH
Richard Penn
Chicago, IL, USA

12:00 PM Discussion

5104 Parallel Session: Not to be forgotten Movement Disorders

Location: Dolmabahce B

Chair: Hiroshi Shibasaki
Kyoto, Japan
Co-Chair: Wolfgang Oertel
Marburg, Germany

10:30 AM Immunological Movement Disorders
Gavin Giovannoni
London, United Kingdom

Wednesday, June 06, 2007

11:00 AM **Peripherally induced Movement Disorders**
Angelo Quartarone
Messina, Italy

11:30 AM **Myoclonus**
Hiroshi Shibasaki
Kyoto, Japan

12:00 PM **Stereotypies and catatonia**
Kapil Sethi
Atlanta, GA, USA

5105 Parallel Session: Update on Tauopathies

Location: Dolmabahce C
Chair: Irene Litvan
Louisville, KY, USA
Co-Chair: Andrew Lees
London, United Kingdom

10:30 AM **Lessons from familial tauopathies and genetic studies**
Zbigniew K. Wszolek
Jacksonville, FL, USA

11:00 AM **PSP**
David R. Williams
Melbourne, Australia

11:30 AM **CBD**
Irene Litvan
Louisville, KY, USA

12:00 PM **Discussion**

5106 Parallel Session: Ataxia: What's new?

Location: Mini-Auditorium
Chair: Mark Hallett
Bethesda, MD, USA
Co-Chair: Ryuji Kaji
Tokushima City, Japan

10:30 AM **What does the cerebellum do?**
Mark Hallett
Bethesda, MD, USA

11:00 AM **Genetic ataxias**
Ludger Schoels
Tübingen, Germany

11:30 AM **Secondary ataxias**
Thomas Klockgether
Bonn, Germany

12:00 PM **Discussion**

5107 Parallel Session: Movement Disorder emergencies

Location: Topkapi A
Chair: Oscar S. Gershanik
Buenos Aires, Argentina
Co-Chair: Bhim Singhal
Mumbai, India

10:30 AM **Parkinsonian emergencies**
Oscar S. Gershanik
Buenos Aires, Argentina

11:00 AM **Neuroleptic malignant syndrome**
Sadako Kuno
Tokyo, Japan

11:30 AM **Hyperkinetic emergencies**
François Tison
Pessac, France

12:00 PM **Discussion**

5108 Parallel Session: Current management of Parkinson's disease: Non-motor symptoms - Teaching Course

Location: Marmara Room
Chair: David John Burn
Newcastle Upon Tyne, United Kingdom
Co-Chair: Hasmet A. Hanagasi
Kozyatagi, Turkey

10:30 AM **Cognitive impairment and dementia**
David John Burn
Newcastle Upon Tyne, United Kingdom

11:00 AM **Depression and other psychiatric manifestations**
Paolo Barone
Napoli, Italy

11:30 AM **Autonomic dysfunction**
Jacobus J. van Hilten
Leiden, Netherlands

12:00 PM **Discussion**

5109 Parallel Session: Pediatric Movement Disorders in an office setting: Diagnosis and treatment - Teaching Course

Location: Topkapi B
Chair: Emilio Fernandez-Alvarez
Barcelona, Spain
Co-Chair: Aikaterini Kompoliti
Chicago, IL, USA

10:30 AM **An approach to the child with Movement Disorders**
Padraic James Grattan-Smith
Sydney, Australia

11:00 AM **Cerebral palsy look-alike Movement Disorders**
Emilio Fernandez-Alvarez
Barcelona, Spain

11:30 AM **Tics and Tourette**
Aikaterini Kompoliti
Chicago, IL, USA

12:00 PM **Discussion**

Wednesday, June 06, 2007

Poster Presentations

Admission to this session is by delegate name badge. No ticket is required for admission to Poster Presentations.

Poster Session 2
Location: Lower Level, Rumeli Hall

Poster Viewing: 9:00 AM - 4:00 PM
Authors Present 12:30 PM - 2:30 PM
Poster Numbers: 346-662 and 788

2:30 PM to 4:30 PM

5201 Skills Workshop: Parenteral administration of Parkinson's disease medication
Location: Mini-Auditorium
Maria Jose Marti Domenec
Barcelona, Spain
Giovanni Fabbrini
Rome, Italy

5202 Skills Workshop: Sleep studies in Movement Disorders
Location: Topkapi B
Birgit Högl
Innsbruck, Austria
Alex Iranzo Riquer
Barcelona, Spain

5301 Video Session: Unusual phenotypes of defined genetic diseases
Location: Halic
Emilio Fernandez-Alvarez
Barcelona, Spain
Marie-Jose Vidailhet
Paris, France

5302 Video Session: Psychogenic Movement Disorders that look real and real Movement Disorders that look psychogenic
Location: Anadolu Auditorium
Anette Schrag
London, United Kingdom
John G.L. Morris
Sydney, Australia

5401 Meet the Expert Session: Iatrogenic Movement Disorders
Location: Dolmabahce B
Pierre J. Blanchet
Montreal, PQ, Canada
William J. Weiner
Baltimore, MD, USA

5402 Meet the Expert Session: Evaluation of eye movements
Location: Dolmabahce C
R. John Leigh
Cleveland, OH, USA
David Zee
Ellilott City, MD, USA

5601 Oral Platform Presentations 1
Location: Marmara Room
Chair: Rivka Inzelberg
Kfar Saba, Israel
Chair: Vladimir Kostic
Belgrade, Serbia and Montenegro

5602 Oral Platform Presentations 2
Location: Dolmabahce A
Chair: Bluent Elibol
Ankara, Turkey
Chair: Heinz Reichmann
Dresden, Germany

5701 How-To-Do-It Session: How to examine mental function in patients with Movement Disorders
Location: Topkapi A
Dag Aarsland
Stavanger, Norway
Murat Emre
Capa Istanbul, Turkey

5:00 PM to 6:30 PM

5901 Highlights of Poster Sessions 1-Clinical
Location: Anadolu Auditorium
Chair: Okan Dogu
Mersin, Turkey
Chair: James Leverenz
Seattle, WA, USA

5902 Highlights of Poster Sessions 2-Clinical
Location: Marmara Room
Chair: Jamie Kulisevsky
Barcelona, Spain
Chair: Marcelo Merello
Buenos Aires, Argentina

Thurssday, June 07, 2007

8:30 AM to 10:00 AM

6051 Plenary Session 3

Location: Anadolu Auditorium

Chair: Günther Deuschl
Kiel, Germany

Chair: Yoshikuni Mizuno
Tokyo, Japan

8:30 AM **Essential Tremor**
Joseph Jankovic
Houston, TX, USA

9:00 AM **Huntington's disease**
M. Flint Beal
New York, NY, USA

9:30 AM **Stanley Fahn Lecture: DBS for Parkinson's disease 30,000 patients later. What have we learned and what remains to be done?**
Pierre Pollak
Grenoble, France

10:30 AM to 12:30 PM

6052 Plenary Session 4: Dystonia

Location: Anadolu Auditorium

Chair: Giovanni Abbruzzese
Genova, Italy

Chair: Andrew J. Lees
London, United Kingdom

10:30 AM **Update on clinical features of sporadic and familial dystonia**
Thomas T. Warner
London, United Kingdom

11:00 AM **Update on the pathogenesis: Role of plasticity in the evolution and devolution of dystonia**
Hartwig R. Siebner
Kiel, Germany

11:30 AM **Update on the molecular genetics of familial dystonia**
Laurie J. Ozelius
New York, NY, USA

12:00 PM **Update on the management of dystonia: DBS, intrathecal baclofen, b-toxin, and medication**
Ryuji Kaji
Tokushima City, Japan

Poster Presentations

Admission to this session is by delegate name badge. No ticket is required for admission to Poster Presentations.

Poster Session 3
Location: Lower Level, Rumeli Hall

Poster Viewing: 9:00 AM - 4:00 PM
Authors Present 12:30 PM - 2:30 PM
Poster Numbers: 663 - 973

2:30 PM to 4:30 PM

6501 Controversies

Location: Anadolu Auditorium

Chair: Amos D. Korczyn
Ramat-Aviv, Israel

Chair: Serge Przedborski
New York, NY, USA

Early surgery for Parkinson's disease vs late?

2:30 PM **Early**
Andres M. Lozano
Toronto, ON, Canada

2:45 PM **Late**
Paul E. Greene
New York, NY, USA

Is there evidence for genetic/environmental interactions in Parkinson's disease?

3:00 PM **Yes**
Caroline M. Tanner
Sunnyvale, CA, USA

3:15 PM **No**
John A. Hardy
Bethesda, MD, USA

Is Braak staging valid?

3:30 PM **Yes**
Howard Hurtig
Philadelphia, PA, USA

3:45 PM **No**
Wolfgang H. Oertel
Marburg, Germany

Does proteosome inhibition cause Parkinson's disease?

4:00 PM **Yes**
C. Warren Olanow
New York, NY, USA

4:15 PM **No**
Jeffrey Kordower
Chicago, IL, USA

Novartis and Orion are proud to be *Platinum Supporters* of The *Movement* Disorder Society's 11th International Congress of Parkinson's Disease and Movement Disorders

As supporters of research for an Optimized Levodopa Therapy, Novartis and Orion invite you to join us at *booth 103*

And don't miss the Opening Seminar, a comprehensive look at the past, present, and future of levodopa therapy:

Levodopa—Still the One

Date: Sunday, June 3, 2007

Time: 5:00–7:00 PM

Presentations

- **History of Levodopa**
- **Levodopa—Advantages and Disadvantages in the Treatment of PD**
- **Role of COMT Inhibitors**
- **New Levodopas**

This Opening Seminar is supported through an unrestricted education grant.

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3/07

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Breda, Netherlands
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The first and only transdermal patch for Parkinson's disease

- Once-daily non-ergolinic dopamine agonist[1]
- Steady-state plasma concentration profile over 24 hours[2]
- 24 hour coverage for the signs and symptoms of all stages of Parkinson's disease[1,3,4]
- Well tolerated[3]

Neupro®
rotigotine transdermal patch
The Parkinson's Patch

Please contact your local representative for the full prescribing information.

NEUPRO® Rotigotine. Prescribing Information. Presentation: Neupro® is a thin, matrix-type square transdermal patch. **Neupro 2 mg/24 h transdermal patch:** Releases 2 mg rotigotine over 24 hours. 10 cm² patch contains 4.5 mg rotigotine. **Neupro 4 mg/24 h transdermal patch:** Releases 4 mg rotigotine over 24 hours. 20 cm² patch contains 9.0 mg rotigotine. **Neupro 6 mg/24 h transdermal patch:** Releases 6 mg rotigotine over 24 hours. 30 cm² patch contains 13.5 mg rotigotine. **Neupro 8 mg/24 h transdermal patch:** Releases 8 mg rotigotine over 24 hours. 40 cm² patch contains 18.0 mg rotigotine. **Indications:** To treat the signs and symptoms of early-stage idiopathic Parkinson's disease without concomitat levodopa therapy and for late-stage idiopathic Parkinson's disease with concomitat levodopa therapy. **Dosage:** Neupro is applied to the skin once a day. The patch remains on the skin for 24 hours and will then be replaced by a new one at a different application site. Treatment is initiated with a single daily dose of 2 mg/24 h. Increase dose by 2 mg/24 h each week (e.g. 2 mg/24h in Week 1, 4 mg/24h in Week 2, 6 mg/24h in Week 3 and 8 mg/24h in Week 4), until an effective dose is reached. Maximal dose is 8 mg/24 h for early-stage, and 16 mg/24 h for late-stage Parkinson's disease. **Contraindications:** Hypersensitivity to rotigotine or to any of the excipients. Neupro should be removed prior to Magnetic Resonance Imaging (MRI) or cardioversion to avoid burns. **Warnings and precautions:** External heat should not be applied to the patch. Dopamine agonists are known to cause hypotension, and monitoring of blood pressure is recommended. Where somnolence or sudden sleep onset occurs, or where there is persistent, spreading or serious skin rash at the application site, consider dose reduction or termination of therapy. Rotate the site of patch application to minimise the risk of skin reactions. In case of generalised skin reaction associated with use of Neupro, discontinue treatment. Avoid exposure to direct sunlight until the skin is healed. If treatment is to be withdrawn, it should be gradually reduced to avoid symptoms of neuroleptic malignant syndrome. Compulsive behaviours and hallucinations have been reported in patients treated with Neupro. Do not administer neuroleptics or dopamine antagonists to patients taking dopamine agonists. Caution is advised when treating patients with severe hepatic impairment, and in patients taking sedating medicines or other depressants in combination with rotigotine. Switching to another dopamine agonist may be beneficial for those patients who are insufficiently controlled by rotigotine. **Undesirable effects:** Very common side effects include nausea, vomiting, somnolence, dizziness and application site reactions. Common side effects include anorexia, hallucinations, sleep attacks, insomnia, abnormal dreams, headache, dyskinesia, lethargy, orthostatic hypotension, hypertension, hiccup, cough, constipation, diarrhoea, dry mouth, dyspepsia, hyperhydrosis, erythema, pruritis, asthenic conditions and peripheral oedema. Uncommonly, syncope, loss of consciousness, visual disturbances, or hypotension may occur. Rarely, psychotic disorders, increased libido or convulsion may occur. **Product Licence number:** EU/1/05/331/001-013. Product Licence holder: SCHWARZ PHARMA Ltd, Shannon Industrial Estate, Shannon, Co. Clare, Ireland. **Date of preparation:** January 2007. **Date of literature preparation:** January 2007. Neupro® is a registered trademark. Prescribers should consult the Summary of Product Characteristics for the full information on side-effects, warnings and precautions. Further information is available from SCHWARZ PHARMA AG, Alfred-Nobel-Straße 10, Monheim, Germany. May not be approved in your country.

For more information visit www.neupro.com.

References:
1. Neupro Summary of Product Characteristics.
2. Braun M. et al. Poster presented at EFNS 2005.
3. Watts et al. Neurology January 2007.
4. LeWitt et al. Poster presented at WCN 2005.

SCHWARZ PHARMA

Exhibitor Information

General Information and Exhibit Hours

Please allow adequate time in your daily schedule to visit the Exhibit Hall, located in the Rumeli Building, upper floor which is directly next to the Istanbul Convention and Exhibition Centre (ICEC). The exhibition is an integral component of your International Congress experience, offering you the opportunity to speak with representatives of companies providing services or marketing products directly related to Movement Disorders. Delegates may visit the Exhibit Hall during the following hours:

Monday, June 4	9:00 a.m. to 5:00 p.m.
Tuesday, June 5	9:00 a.m. to 5:00 p.m.
Wednesday, June 6	9:00 a.m. to 5:00 p.m.
Thursday, June 7	9:00 a.m. to 4:00 p.m.

Exhibitor Registration

Location: Rumeli Building foyer

Exhibitors must register at the Exhibitor Registration Desk located inside the entrance of the Rumeli Building during the following hours:

Saturday, June 2	4:00 p.m. to 8:00 p.m.
Sunday, June 3	9:00 a.m. to 8:30 p.m.
Monday, June 4	7:00 a.m. to 6:00 p.m.
Tuesday, June 5	7:00 a.m. to 6:00 p.m.
Wednesday, June 6	7:00 a.m. to 6:00 p.m.
Thursday, June 7	7:00 a.m. to 5:00 p.m.

Exhibitor Badge Policy

Admission to the Exhibit Hall will be by name badge only. Security guards will monitor Exhibit Hall entrances for proper identification. Exhibit stand personnel must show an official MDS exhibitor name badge in order to gain access to the Exhibit Hall during installation, show, or dismantlement hours. Independent contractor personnel, hired by an exhibitor to install and dismantle their display, should register on-site for a temporary name badge valid for only installation and dismantlement hours.

Exhibitor Badge (Yellow): Allows admittance to the exhibit hall area only.

Exhibitor Delegate Badge (Orange): Allows the delegate to enter the Exhibit hall as an exhibitor and attend scientific sessions (requiring a ticket) and the Welcome Reception.

Endorsement Disclaimer

Products and services displayed in the Exhibit Hall or advertised in the program occur by contractual business arrangements between MDS and participating companies and organizations. These arrangements do not constitute nor imply an endorsement by MDS of these products and services.

Exhibitor Directory

Allergan, Ltd.
Marlow International, the Parkway
Marlow, Bucks
SL7 1YL
UK
Telephone: +44-1628-494-444
Fax: +44-1628-494-449
Web site: www.allergan.co.uk

Booth #: 110

With more than 55 years of experience providing high-quality, science-based products, Allergan, Inc., with UK offices in Marlow, Bucks and worldwide headquarters in Irvine, California, USA, discovers, develops and commercializes products in the ophthalmology, neurosciences, medical dermatology, medical aesthetics, obesity intervention and other specialty markets that deliver value to its customers, satisfy unmet medical needs, and improve patients' lives

Boehringer Ingelheim GmbH
Binger Str. 173
Ingelheim, Rheinland-Pfalz 55216
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Telephone: +49-6132-77-0
Fax: +49-6132-72-0
Web site: www.boehringer-ingelheim.com

Booth #: 101

Pramipexole (known in Europe under the trade names Sifrol® and Mirapexin®, in the U.S.A. as Mirapex® and in Turkey as Pexola®) is a compound from Boehringer Ingelheim research first approved in 1997 for the treatment of the signs and symptoms of idiopathic Parkinson's disease, as monotherapy or in combination with levodopa. Pramipexole is approved throughout the European Union, in the U.S.A. and in several other countries for the symptomatic treatment of moderate to severe idiopathic Restless Legs Syndrome (RLS).

Britannia Pharmaceuticals Limited
41-51 Brighton Road
Redhill, Surrey RH1 6YS
United Kingdom
Telephone: +44-1737-773-741
Web site: www.britannia-pharm.co.uk

Booth #: 119

Britannia Pharmaceuticals Ltd. is a UK-based company which markets a range of Apo-go (apomorphine Hcl) products for the treatment of disabling motor fluctuations in Parkinson's disease patients which persist, despite individually titrated treatment with oral Parkinson's disease medications.

GE Healthcare
Pollards Wood, Nightingales Lane
Chalfont St. Giles, Bucks HP8 4SP
United Kingdom
Telephone: +44 1494-54-4000
Fax: +44 1494-49-8234
Web site: www.gehealthcare.com

Booth #: 108

GE Healthcare is dedicated to helping you transform healthcare delivery by driving critical breakthroughs in biology and technology. Our expertise in medical imaging is enabling healthcare professionals around the world discover new ways to predict, diagnose and treat disease earlier. While at MDS, please visit our stand to learn more about DaTSCAN.

GlaxoSmithKline plc
980 Great West Road
Brentford, Middlesex TW8 9GS
United Kingdom
Telephone: +44-20-8047-5000
Web site: www.gsk.com

Booth #: 102

GlaxoSmithKline (GSK) is a research-based pharmaceutical company with a mission to improve the quality of human life by enabling people to do more, feel better and live longer. GSK makes medicines, vaccines and consumer healthcare products. Its business accounts for 6.3% of the world's pharmaceutical market. In 2006, GSK invested £3.5 billion and employed over 15,000 people in research and development with the aim of building the best product pipeline in the industry. GSK donates money, medicines, time and equipment to help improve health and education in under-served communities. GSK supports public health initiatives and local community projects around the world and donates medicines to support disaster relief efforts and impoverished communities.

Ipsen
42 rue du Docteur Blanche
Paris 75016
France
Telephone: +33-1-44-30-43-15
Fax: +33-1-44-30-42-00
Web site: www.ipsen.com

Booth #: 118

Ipsen is a European pharmaceutical group with over 20 products on the market and a total worldwide staff of nearly 4,000. The company's development strategy is based on a combination of products in targeted therapeutic areas (oncology, endocrinology and neuromuscular disorders), which are growth drivers and primary care products which contribute significantly to its research financing. This strategy is also supported by an active policy of partnerships. The location of its four R&D centres (Paris, Boston, Barcelona, London) gives the Group a competitive edge in gaining access to leading university research teams and highly qualified personnel. In 2005, Research and Development expenditure reached €169.0 million, i.e. 20.9% of consolidated sales, which amounted to €807.1 million in the Group's pro forma accounts set up according to the IFRS. Nearly 700 people in R&D are dedicated to the discovery and development of innovative drugs for patient care.

H. Lundbeck A/S
Ottiliavej 9,
Copenhagen – Valby DK-2500
Denmark
Telephone: + 45-36-30-13-11
Fax: + 45-36-30-19-40
Web site: www.lundbeck.com

Booth #: 105

Azilect – a new treatment for Parkinson's disease both as monotherapy in early disease and as adjunctive therapy in more advanced disease. Several large clinical trials demonstrated Azilect's high efficacy, together with good safety profile and high tolerability including in elderly patients and convenient dosing – once daily, no titration.

Medtronic, Inc.
710 Medtronic Parkway NE
Minneapolis, MN 55432
USA
Telephone: +1 763-514-4000
Fax: +1 763-514-4879
Web site: www.medtronic.com

Booth #: 109

Medtronic is the global leader in medical technology – alleviating pain, restoring health and extending life for millions of people around the world. Activa® Deep Brain Stimulation Therapy, exhibited, has been used in more than 35,000 patients worldwide for the treatment of the three most common movement disorders: Parkinson's disease, essential tremor and dystonia.

Merck Serono
9, Chemin des Mines
Geneva 1211
Switzerland
Telephone: +41-22-414-3600
Fax: + 41-22-414-3085
Web site: www.merckserono.net

Booth #: 112

Merck Serono, a division of Merck KGaA, Darmstadt, Germany, is a global business focusing on innovative prescription pharmaceuticals with headquarters in Geneva. The entity has leading brands serving patients in the areas of Oncology (Erbitux®), Neurology (Rebif®) and other therapeutic areas. Merck Serono's research programs are focused on establishing new therapeutic agents in other areas, including Parkinson's disease.

Merz Pharmaceuticals GMBH
Eckenheimer Landstrase 100
Frankfurt 60318
Germany
Telephone: +49-69-1503-0
Fax: +49-69-1503-200
Web site: www.merz.de

Booth #: 116

Product Name: Xeomin

Active substance: Clostridium Botulinum neurotoxin Type A (150 KD), free of complexing proteins 100 LD_{50} units per vial

Noldus Information Technology b.v.
Nieuwe Kanaal 5
Wageningen 6709 PA
The Netherlands
Telephone: +31-317-473-300
Fax: +31-317-424496
Web site: www.noldus.com

Booth #: 121

Noldus Information Technology develops and supports professional software and instrumentation for behavioral research. Our product range includes several products especially developed for neuroscience research. Or latest product, CatWalk, is the ultimate system to dynamically measure footprints of rodents on basis of which locomotor deficits and pain syndromes can be assessed.

Novartis Pharma AG
Lichtstr. 35
Basel CH-4002
Switzerland
Telephone: + 41-61-324-1111
Fax: + 41-61-324-6652
Web site: www.novartis.com

Booth #: 103

Novartis AG is a world leader in pharmaceuticals and consumer health, headquartered in Basel, Switzerland. Novartis researches, develops, manufacturers and markets leading innovative prescription drugs used to treat a number of diseases and conditions and has been a leader in the Neuroscience area for more than 50 years.

Please feel invited to visit the combined exhibition of Novartis and Orion.

Orion Corporation Orion Pharma
Orionintie 1
FI-02101 Espoo
Finland
Telephone: + 358-10-4261
Fax: +358-10-426-3815
Web site: www.orion.fi/english

Booth #: 103

Orion Corporation (OMX Helsinki, ORNAV, ORNBV) is a European, R&D-based, business-driven pharmaceuticals and diagnostics company with special emphasis on developing innovative treatments and diagnostic tests for global markets.

Please feel invited to visit the combined exhibition of Novartis and Orion

For further information please visit the companies' Web sites.

Pfizer Inc
235 East 42nd Street
New York, NY 10017
USA
Telephone: +1 212-733-2323
Web site: www.pfizer.com

Booth #: 104

Cabaser is approved for the symptomatic treatment of Parkinson's disease (PD).

Pfizer Inc, founded in 1849, is dedicated to better health and greater access to healthcare. Our purpose is helping people live longer, healthier, happier lives. Our route to that purpose is through discovering and developing breakthrough medicines; providing information on prevention, wellness, and treatment; consistent high-quality manufacturing of medicines, consumer products; and global leadership in corporate responsibility.

Schwarz Pharma AG
Alfred-Nobel-Strasse 10
Monheim 40789
Germany
Telephone: +49 2173-48-0
Fax: +49 2173-48-1608
Web site: www.schwarzpharma.com

Booth #: 106

SCHWARZ PHARMA AG (Monheim, Germany) is a publicly traded company, which develops and markets innovative drugs with the focus on Central Nervous System (CNS) as well as cardiovascular and gastro-intestinal diseases. These drugs are manufactured and marketed by SCHWARZ PHARMA affiliates in Europe, USA and Asia.

Solstice Neurosciences, Inc.
40 General Warren Blvd., Suite 160
Malvern, PA 19355
USA
Telephone: +1 267-620-8000
Fax: +1 267-620-8190
Web site: http://www.solsticeneuro.com/

Booth #: 117

Solstice Neurosciences, Inc. is a specialty biopharmaceutical company focused on the development, manufacturing, sales and marketing of specialty products. Solstice's first product, Myobloc® (Botulinum Toxin Type B) Injectable Solution, represents the only Botulinum Toxin Type B currently available to physicians and patients worldwide.

Solvay Pharmaceuticals GmbH
Hans-Böckler-Allee 20
Hannover 30173
Germany
Telephone: +49 511-857-0
Fax: +49 511-857-2294
Web site: www.solvaypharmaceuticals.com

Booth #: 111

Solvay Pharmaceuticals is a global player in selected disease target areas. One of the strong focuses concentrates research and development efforts in Neurology, where doctors and patients may count with new and better therapies to choose from. Duodopa represents a new concept in the treatment of PD patients, assuring constant and stable plasma levodopa concentrations. Duodopa increases ON time, is suitable as monotherapy and improves quality of life.

Teva Pharmaceutical Industries Ltd.
P.O. Box 3190
Petah Tiqva 49131
Israel
Telephone: + 972-3-926-7267
Fax: + 972-3-923-4050
Web site: www.tevapharm.com

Booth #: 105

Azilect – a new treatment for Parkinson's disease both as monotherapy in early disease and as adjunctive therapy in more advanced disease. Several large clinical trials demonstrated Azilect's high efficacy, together with good safety profile and high tolerability including in elderly patients and convenient dosing – once daily, no titration.

The *Movement* Disorder Society
International Secretariat
555 East Wells Street, Suite 1100
Milwaukee, WI 53202-3823
USA
Telephone: +1 414-276-2145
Fax: +1 414-276-3349
www.movementdisorders.org

Booth: Located in the Istanbul Convention and Exhibition Centre (main building)

The *Movement* Disorder Society is an international, professional society of clinicians, scientists, and other healthcare professionals, who are interested in Parkinson's disease, related neurodegenerative and neurodevelopmental disorders, hyperkinetic Movement Disorders, and abnormalities in muscle tone and motor control. Visit our exhibit booth to learn more about MDS and membership opportunities.

Valeant Pharmaceuticals International
One Enterprise
Aliso Viejo, CA 92656
USA
Telephone: +1 949-461-6000
Fax: +1 949-461-6609
Web site: www.valeant.com

Booth #: 107

Valeant Pharmaceuticals International (NYSE: VRX) is a global specialty pharmaceutical company that develops, manufactures and markets a broad range of pharmaceutical products primarily in the areas of neurology, infectious disease and dermatology. More information about Valeant can be found at www.valeant.com.

Vernalis Pharmaceuticals Inc.

1140 Headquarters Plaza
2nd Floor, West Tower
Morristown, NJ 07960
USA
Telephone: +1 973-867-5555
Fax: +1 973-867-5524
Web site: www.vernalis.com

Booth #: 120

Vernalis is a specialty bio-pharmaceutical company with two marketed products: Apokyn® (apomorphine hydrochloride injection) and Frova® (frovatriptan). The company has a broad development pipeline focused on neurology and central nervous system disorders.

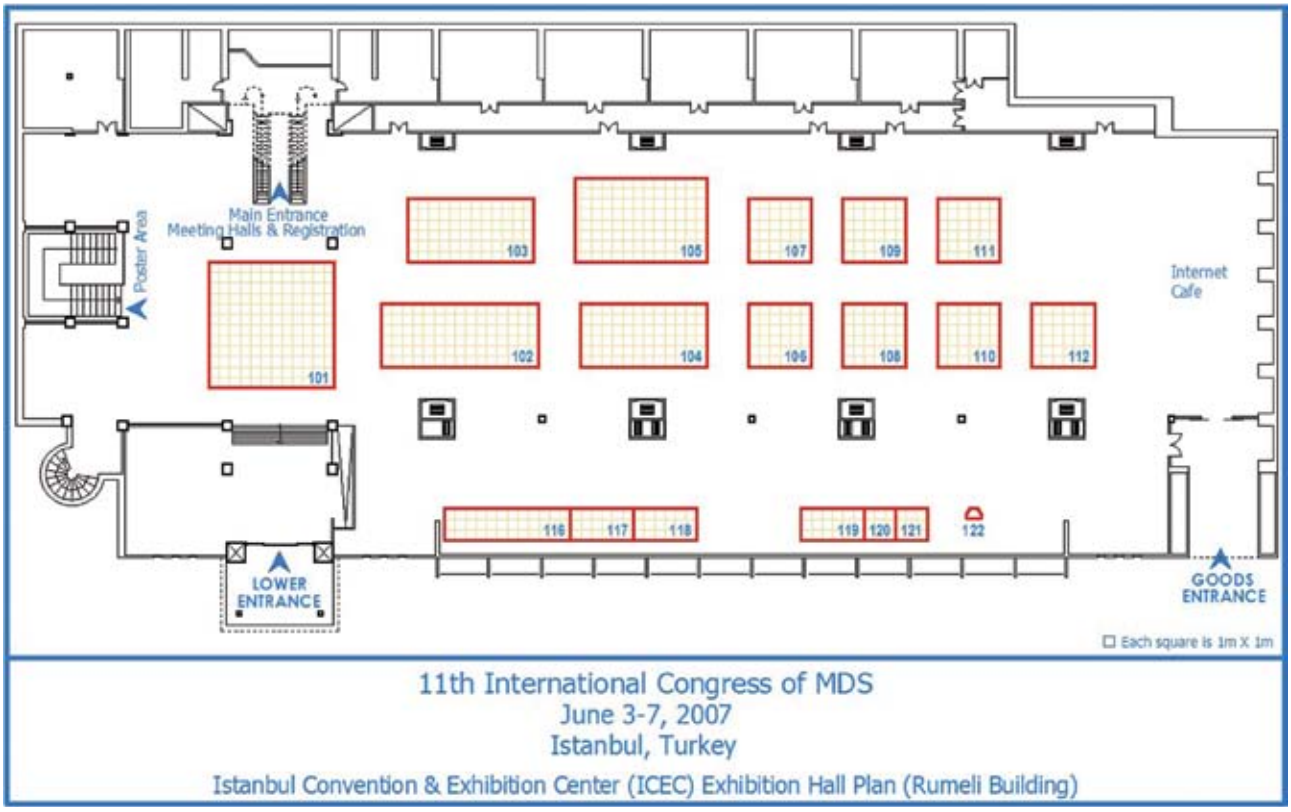
Wiley-Blackwell

111 River Street
Hoboken, NJ 07030 USA
Telephone: +1 201-748-6000
Fax: +1 201-748-6088
Web site: www.wiley.com

Booth #: 122

Wiley-Blackwell is proud to publish *Movement Disorders* on behalf of The *Movement* Disorder Society. Wiley-Blackwell (formed in 2007) combines two of the most respected publishers in the world: Blackwell and John Wiley & Sons. Wiley-Blackwell's portfolio now includes 1,250 scholarly journals, many society-owned, and numerous books with global appeal.

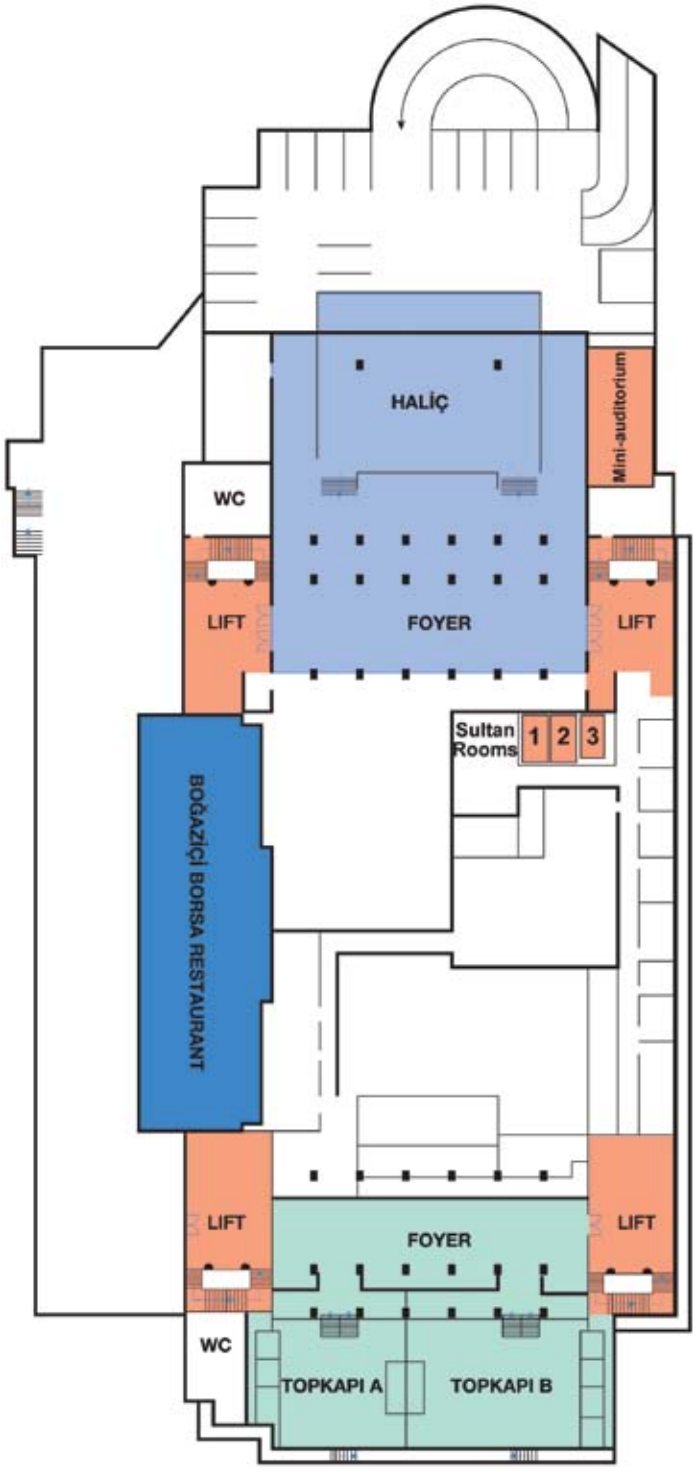
Exhibit Hall Floor Plan



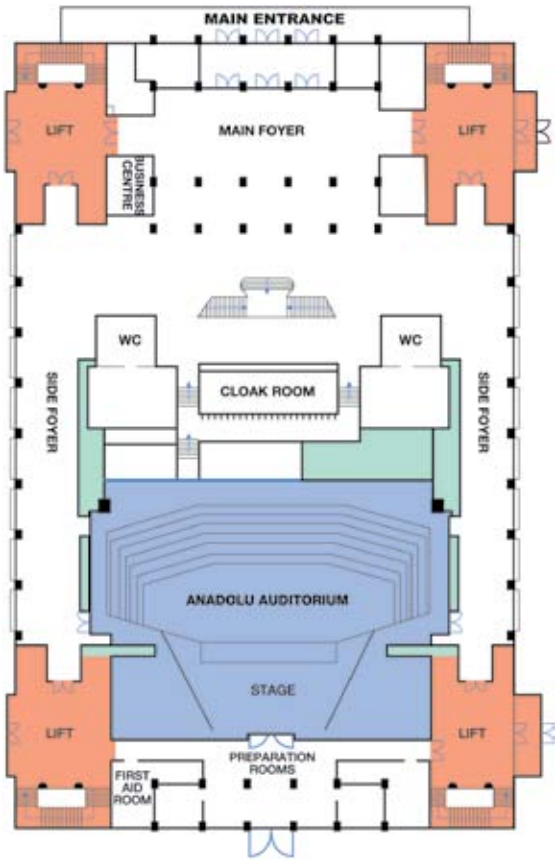
11th International Congress of MDS
June 3-7, 2007
Istanbul, Turkey

Istanbul Convention & Exhibition Center (ICEC) Exhibition Hall Plan (Rumeli Building)

Istanbul Convention and Exhibition Centre Floor Plans

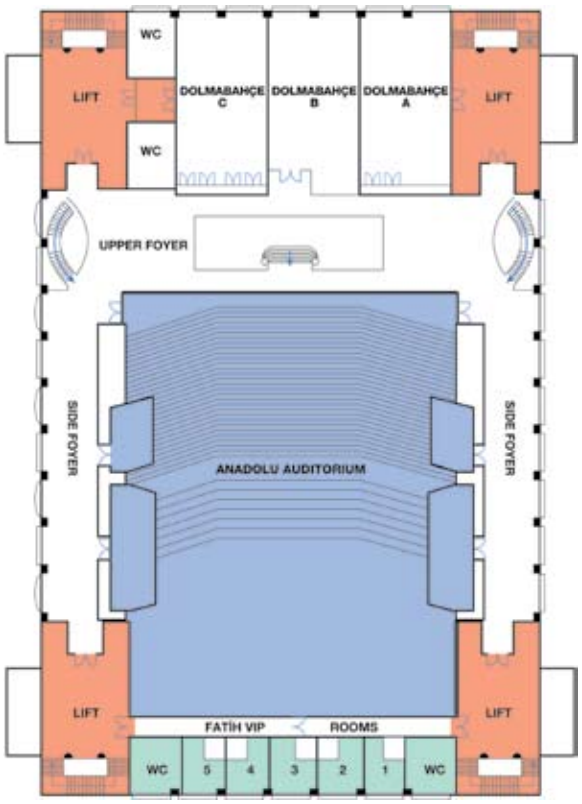


Ground Floor

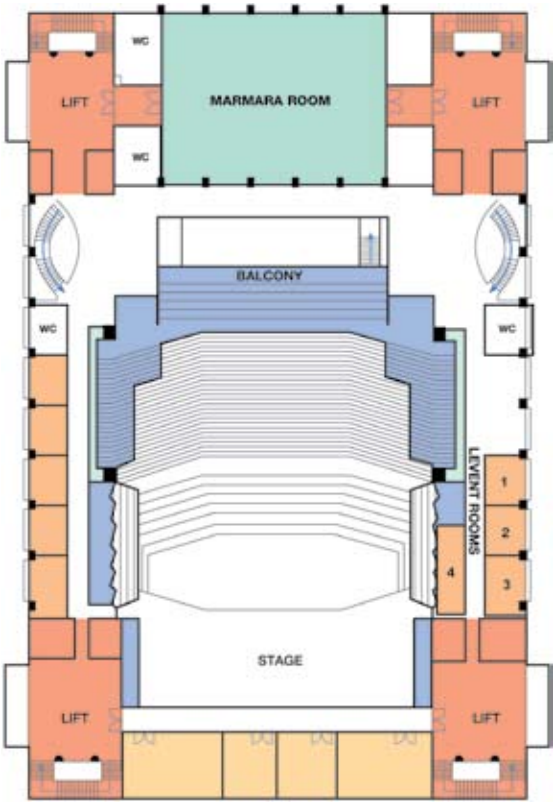


1st Floor

Istanbul Convention and Exhibition Centre Floor Plans



2nd Floor



3rd Floor

Map of Istanbul

REQUIP (ropinirole) Prescribing Information

Presentation 'ReQuip' Tablets, PL 10592/0085-0089, each containing ropinirole hydrochloride equivalent to either 0.25, 0.5, 1, 2 or 5 mg ropinirole. Starter Pack (105 tablets), £40.10. Follow On Pack (147 tablets), £74.40; 1 mg tablets - 84 tablets, £47.26; 2 mg tablets - 84 tablets, £94.53; 5 mg tablets - 84 tablets, £163.27. **Indications** Treatment of idiopathic Parkinson's disease. May be used alone (without L-dopa) or in addition to L-dopa to control "on-off" fluctuations and permit a reduction in the L-dopa dose. **Dosage** Adults: Three times a day, with meals. Titrate dose against efficacy and tolerability. Initial dose for 1st week should be 0.25 mg t.i.d., 2nd week 0.5 mg t.i.d., 3rd week 0.75 mg t.i.d., 4th week 1 mg t.i.d. After initial titration, dose may be increased in weekly increments of up to 3mg/day until acceptable therapeutic response established. If using Follow On Pack, the dose for 5th week is 1.5mg t.i.d., 6th week 2.0mg t.i.d., 7th week 2.5mg t.i.d., 8th week 3.0mg t.i.d. Do not exceed 24 mg/day. Concurrent L-dopa dose may be reduced gradually by around 20%. When switching from another dopamine agonist follow manufacturer's guidance on discontinuation. Discontinue ropinirole by reducing doses over one week. Renal or hepatic impairment: No change needed in mild to moderate renal impairment. Not studied in severe renal or hepatic impairment - administration not recommended. Elderly: Titrate dose in normal manner. Children: Parkinson's disease does not occur in children - do not give to children. **Contra-indications** Hypersensitivity to ropinirole, pregnancy, lactation and women of child-bearing potential unless using adequate contraception. Precautions Caution advised in patients with severe cardiovascular disease and when co-administering with anti-hypertensive and anti-arrhythmic agents. Patients with major psychotic disorders should be treated with dopamine agonists only if potential benefits outweigh the risks. Ropinirole has been associated with somnolence and episodes of sudden sleep onset. Patients must be informed of this and advised to exercise caution while driving or operating machines during treatment with ropinirole. Patients who have experienced somnolence and/or an episode of sudden sleep onset must refrain from driving or operating machines. Caution advised when taking other sedating medication or alcohol in combination with ropinirole. If sudden onset of sleep occurs in patients, consider dose reduction or drug withdrawal. **Drug interactions** Neuroleptics and other centrally active dopamine antagonists may diminish effectiveness of ropinirole - avoid concomitant use. No dosage adjustment needed when co-administering with L-dopa or domperidone. No interaction seen with other Parkinson's disease drugs but take care when adding ropinirole to treatment regimen. Other dopamine agonists may be used with caution. In a study with concurrent digoxin, no interaction seen which would require dosage adjustment. Metabolised by cytochrome P450 enzyme CYP1A2 therefore potential for interaction with substrates or inhibitors of this enzyme - ropinirole dose may need adjustment when these drugs are introduced or withdrawn. Increased plasma levels of ropinirole have been observed with high oestrogen doses. In patients on hormone replacement therapy (HRT) ropinirole treatment may be initiated in normal manner, however, if HRT is stopped or introduced during ropinirole treatment, dosage adjustment may be required. No information on interaction with alcohol - as with other centrally active medications, caution patients against taking ropinirole with alcohol. **Pregnancy and lactation** Do not use during pregnancy - based on results of animal studies. There have been no studies of ropinirole in human pregnancy. Do not use in nursing mothers as lactation may be inhibited. **Adverse reactions** In early therapy: nausea, somnolence, leg oedema, abdominal pain, vomiting and syncope. In adjunct therapy: dyskinesia, nausea, hallucinations and confusion. Postural hypotension, which is commonly associated with dopamine agonists, and decreases in systolic blood pressure have been noted; symptomatic hypotension and bradycardia, occasionally severe, may occur. As with another dopamine agonist, extreme somnolence and/or sudden onset of sleep have been reported rarely, occasionally when driving (see 'Precautions' and 'Effects on ability to drive and use machines'). **Effects on ability to drive and use machines** Patients being treated with ropinirole and presenting with somnolence and/or sudden sleep episodes must be informed to refrain from driving or engaging in activities where impaired alertness may put themselves or others at risk of serious injury or death (e.g. operating machines) until such recurrent episodes and somnolence have resolved. **Overdosage** No incidences reported. Symptoms of overdose likely to be related to dopaminergic activity.

POM

Marketing Authorisation Holder SmithKline Beecham plc t/a GlaxoSmithKline, Stockley Park West, Uxbridge, Middlesex UB11 1BT.

Further information is available from: Customer Contact Centre, GlaxoSmithKline, Stockley Park West, Uxbridge, Middlesex UB11 1BT; customercontactuk@gsk.com; Freephone 0800 221 441.

Prescribing information last revised: November 2005.

In order to continually monitor and evaluate the safety of ReQuip, we encourage healthcare professionals to report adverse events, pregnancy, overdose and unexpected benefits to GlaxoSmithKline on 0800 221 441. Please consult the Summary of Product Characteristics for full details on the safety profile of ReQuip. Information about adverse event reporting can also be found at www.yellowcard.gov.uk.

Date of preparation: February 2007

REQ/FPA/07/29728/1

gsk GlaxoSmithKline

Junior Awards

Two Junior Awards will be presented for outstanding abstracts of The *Movement* Disorder Society's 11th International Congress of Parkinson's Disease and Movement Disorders. One award will be presented for excellence in clinical research, and another for excellence in basic research. Eligible individuals for the Junior Awards must be forty (40) years of age or less, or within five years of completion of training and the first author on the abstract. The *Movement* Disorder Society's Awards Committee selects the two award recipients from those who applied. Please refer to the flyer highlighting the 2007 Junior Awards recipients and their topics, in your registration bag.

WEDNESDAY, JUNE 6, 2007

9:30 a.m.-10:30 a.m.
4103 Junior Award Lectures
Location: Anadolu Auditorium, First Floor, Istanbul Convention and Exhibition Centre
Chairs: Joseph Jankovic
Houston, TX, USA
Eduardo Tolosa
Barcelona, Spain

Social Events

SUNDAY, JUNE 3, 2007

Opening Ceremony and Welcome Reception
7:30 p.m. to 10:00 p.m.

Location: Istanbul Convention and Exhibition Centre and the Rumeli Gardens

All International Congress attendees are warmly invited to meet friends and colleagues during the traditional International Congress Opening Ceremony, which will feature a unique cultural dance show on Sunday evening, June 3, at the Istanbul Convention and Exhibition Centre. A Welcome Reception, accompanied by food, beverage and entertainment, in the Rumeli Gardens will directly follow the Opening Ceremony. Each paid registrant is able to bring one guest to the Welcome Reception only. Guest badges will be available in the registration packet onsite for those who requested one.

WEDNESDAY, JUNE 6, 2007

Gala Event
8:00 p.m. to midnight

Location: Ciragan Palace

All participants of the 11th International Congress are invited to attend the Gala Event at the spectacular Ciragan Palace located by the shores of the Bosphorus for an evening of cultural performances, entertainment and Turkish cuisine. Transportation will be departing from the Hilton, Hyatt, and Istanbul Convention and Exhibition Centre at 7:00 p.m. and suggested attire is smart casual. The cost for one Gala Event ticket is $100 USD. A ticket is required for entrance to the Gala Event and will be enclosed in delegates' registration materials. If you have not already purchased a Gala Event ticket and would like to do so, please visit the Registration Desk to inquire about availability.

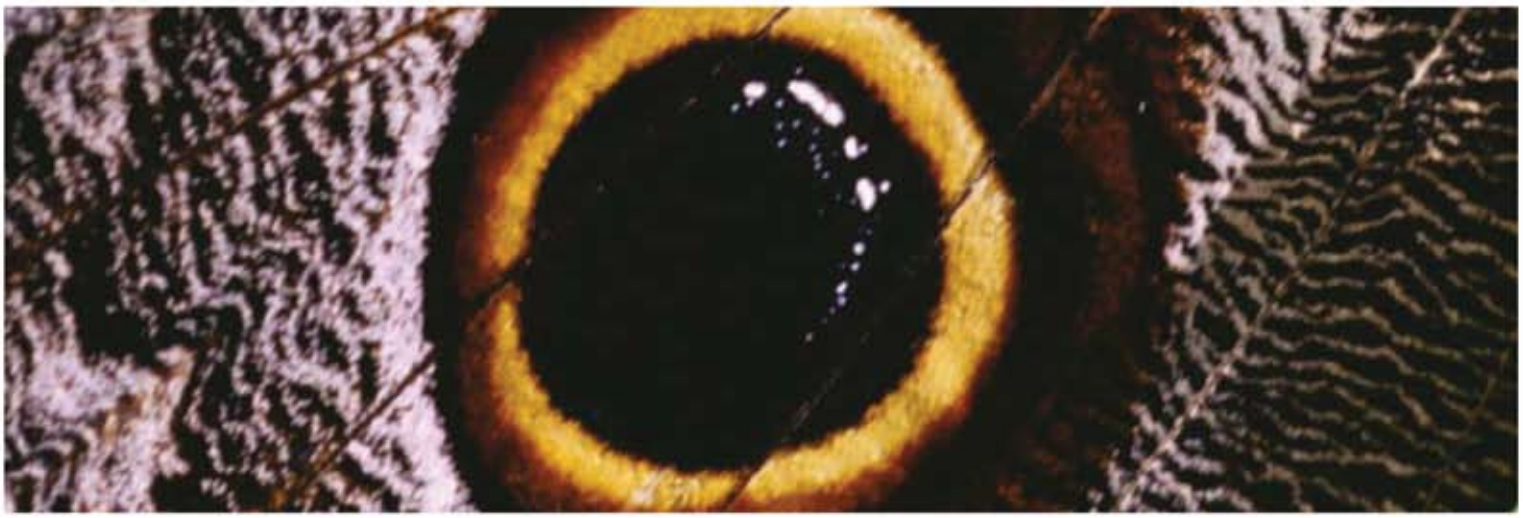
Satellite Symposia

Sunday, June 3, 2007
11:30 a.m.-1:00 p.m.
Restorative Neurology Facts or Fiction?
For further information please contact:
Ann Marie Janson Lang
Phone: +468 58583733
Fax: +468 7116659
am.janson-lang@mednut.ki.se
http://www.swemodis.se

Swedish Movement Disorder Society
Swemodis

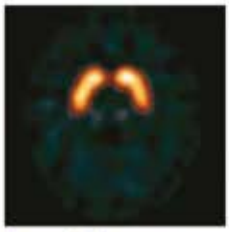
Monday, June 4, 2007
2:30 p.m.-4:30 p.m.
Parkinson's disease Nurse Specialist-a British Perspective, Four Nations One Aim
For further information please contact:
Mrs. Linda Caie
Phone: + 01224 556854
Linda.caie@nhs.net

GE Healthcare

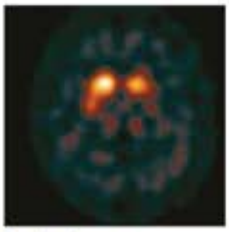


Bird of prey or butterfly?

DaTSCAN
Completes the clinical picture



Essential tremor



Early stage parkinsonian syndrome

DaTSCAN is approved for use in the European Union but not in USA or Japan

GE imagination at work

DaTSCAN™
IOFLUPANE (^{123}I)

PRESCRIBING INFORMATION DaTSCAN™ Ioflupane (^{123}I)
Please refer to full national Summary of Product Characteristics (SPC) before prescribing. Indications and approvals may vary in different countries. Further information available on request. **PRESENTATION** Vials containing 185 MBq or 370 MBq ioflupane (^{123}I) at reference time. **INDICATIONS** Detecting loss of functional dopaminergic neuron terminals in the striatum. i) in patients with clinically uncertain Parkinsonian Syndromes in order to help differentiate Essential Tremor from Parkinsonian Syndromes related to idiopathic Parkinson's Disease (PD), Multiple System Atrophy (MSA), Progressive Supranuclear Palsy (PSP). DaTSCAN is unable to discriminate between PD, MSA and PSP. ii) to help differentiate probable dementia with Lewy bodies (DLB) from Alzheimer's disease. DaTSCAN is unable to discriminate between DLB and Parkinson's disease dementia. **DOSAGE AND METHOD OF ADMINISTRATION** DaTSCAN is a 5% (v/v) ethanolic solution for intravenous injection and should be used without dilution. Clinical efficiency has been demonstrated across the range of 111-185 MBq; do not use outside this range. Appropriate thyroid blocking treatment must be given prior to and post injection of DaTSCAN. SPECT imaging should take place 3-6 hours after injection of DaTSCAN. DaTSCAN is not recommended for use in children or adolescents. For use in patients referred by physicians experienced in the management of movement disorders/dementia. **CONTRAINDICATIONS** Pregnancy and in patients with hypersensitivity to iodide or any of the excipients. **WARNINGS AND PRECAUTIONS** Radiopharmaceuticals should only be used by qualified personnel with appropriate government authorisation and should be prepared using aseptic and radiological precautions. DaTSCAN is not recommended in moderate to severe renal or hepatic impairment. **INTERACTIONS** Consider current medication. Medicines that bind to the dopamine transporter may interfere with diagnosis; these include amfetamine, benzatropine, bupropion, cocaine, mazindol, methylphenidate, phentermine and sertraline. Drugs shown during clinical trials not to interfere with DaTSCAN imaging include amantadine, trihexyphenidyl, budipine, levodopa, metoprolol, primidone, propranolol and selegiline. Dopamine agonists and antagonists acting on the postsynaptic dopamine receptors are not expected to interfere with DaTSCAN imaging and can therefore be continued if desired. **PREGNANCY AND LACTATION** Contraindicated in pregnancy. Information should be sought about pregnancy from women of child bearing potential. A woman who has missed her period should be assumed to be pregnant. If administration to a breast feeding woman is necessary, substitute formula feeding for breast feeding. **UNDESIRABLE EFFECTS** No serious adverse effects have been reported. Common side effects include headache, vertigo and increased appetite and formication. Exposure to ionising radiation is linked with cancer induction and a potential for hereditary defects and must be kept as low as reasonably achievable. Intense pain on injection has been reported uncommonly following administration into small veins. **DOSIMETRY** Effective dose from 185 MBq is 4.35 mSv. **OVERDOSE** Encourage frequent micturition and defecation. **MARKETING AUTHORISATION HOLDER** GE Healthcare Limited, Amersham Place, Little Chalfont, Buckinghamshire, HP7 9NA, UK. **CLASSIFICATION FOR SUPPLY** Subject to medical prescription. **MARKETING AUTHORISATION NUMBERS** EU/1/00/135/001 and EU/1/00/135/002. **DATE OF REVISION OF TEXT** 14 November 2006. **UK Price** 185MBq: £390.60 - 185MBq

Information about adverse event reporting can be found at www.yellowcard.gov.uk.
Adverse events should also be reported to GE Healthcare.

GE Healthcare Limited, Amersham Place, Little Chalfont, Buckinghamshire, England, HP7 9NA.
www.gehealthcare.com

04-2007 JB2646/MB002819/OS INT'L ENG

Oral Platform Presentations 4601

Tuesday, June 5, 2007 - 2:30 PM - 4:30 PM
Room: Marmara Room
Chair: John Hardy, *Bethesda, MD, USA*
Daniel Tarsy, *Boston, MA, USA*

Restless legs syndrome and other movement disorders

1 **Evidence for linkage of Restless legs syndrome to chromosome 9p: Are there two distinct loci?**
K. Lohmann-Hedrich, A. Ziegler, A. Neumann, A. Kleensang, T. Lohnau, H. Muhle, A. Djarmati, I.R. Konig, P.L. Kramer, U. Stephani, C. Klein (Luebeck, Germany)

2 **RLS patients can also develop compulsions on dopaminergic agonists**
E. Pourcher, H. Cohen (Quebec, Quebec, Canada)

3 **Transcranial sonography in Restless legs syndrome**
J. Godau, A.-K. Wevers, A. Gaenslen, A. Di Santo, E. Caliskan-Erle, T. Gasser, D. Berg (Tübingen, Germany)

4 **Original clinical and biological findings in 3 new mutations of the senataxin gene**
M. Anheim, M.C. Fleury, J. Franques, J.-P. Delaunoy, M. Moreira, M. Koenig, C. Tranchant (Strasbourg, France)

5 **Silver syndrome variant of hereditary spastic paraplegia: Identification of a novel locus**
A. Orlacchio, C. Patrono, F. Gaudiello, V. Moschella, A. Borreca, A. Orlacchio, R. Floris, G. Bernardi, T. Kawarai (Rome, Italy)

6 **Spectrum of gait impairments in presymptomatic and symptomatic Huntington's disease: Cross sectional data**
A.K. Rao, L.M. Muratori, E.D. Louis, C.B. Moskowitz, K.S. Marder (New York, New York, USA)

7 **Frequency of dementia in FMR1 premutation carriers**
M. Sevin, Z. Kutalik, P. Damier, M. Vercelletto, P. Renou, P. Boisseau, S. Bergmann, J.-M. Rival, S. Jacquemont (Nantes, France)

8 **Intrafusal effects of botulinum toxin injection in patients with upper motor neuron syndrome**
C. Trompetto, G. Francavilla, C. Ogliastro, L. Avanzino, M. Bove, A. Berardelli, G. Abbruzzese (Genova, Italy)

Oral Platform Presentations 4602

Tuesday, June 5, 2007 - 2:30 PM - 4:30 PM
Room: Halic Room
Chairs: Carlo Colosimo, *Rome, Italy*
Erik Ch. Wolters, *Amsterdam, The Netherlands*

Atypical parkinsonism and Dystonia

9 **Effect of disease duration on the pattern of cerebral glucose metabolism in patients with multiple system atrophy**
J.H. Lee, C.H. Lyoo, S.H. Oh, M.S. Lee (Seoul, Republic of Korea)

10 **Neuroprotection and Natural History in Parkinson Plus Syndromes (NNIPPS): Results of a randomized placebo-controlled trial of riluzole in PSP and MSA**
P.N. Leigh, A. Ludolph, Y. Agid, G. Bensimon, The NNIPPS Consortium (London, United Kingdom)

11 **Degeneration of cardiac sympathetic nerve can occur in multiple system atrophy**
S. Orimo, T. Kanazawa, A. Nakamura, T. Uchihara, F. Mori, A. Kakita, K. Wakabayashi, H. Takahashi (Tokyo, Japan)

12 **Correlates of side-to-side symmetry of motor manifestations in Parkinsonian disorders**
R.P. Munhoz, H.A. Teive, L.C. Werneck (Curitiba, PR, Brazil)

13 **The dystonia-associated protein torsinA modulates synaptic vesicle recycling**
A. Granata, G. Schiavo, T.T. Warner (London, United Kingdom)

14 **Pallidal deep brain stimulation improves quality of life in segmental and generalized dystonia: Results from a prospective, randomized sham-controlled trial**
J. Mueller, I.-M. Skogseid, R. Benecke, W. Poewe, G. Deuschl, A. Kupsch, T. Trottenberg, J. Volkmann (Innsbruck, Austria) M. Peller, K. Zeuner, M. Weiss, A. Knutzen, M. Hallett, G. Deuschl, H.R. Siebner (Kiel, Schleswig-Holstein, Germany)

16 **Clinical and electrophysiological phenotype of myoclonus dystonia due to epsilon sarcoglycan gene mutations**
E. Apartis, E. Roze, F. Clot, I. Guyon-Marechal, S. Thobois, C. Tranchant, P. Damier, Y. Beaugendre, A. Durr, M. Vidailhet (Paris, France)

Oral Platform Presentations 5601

Wednesday, June 6, 2007 - 2:30 PM - 4:30 PM
Room: Marmara Room
Chairs: Vladimir Kostic, *Belgrade, Serbia/Montenegro*
Rivka Inzelberg, *Kfar Saba, Israel*

Parkinson's disease

17 The physiological effects of pedunculopontine stimulation in patients with Parkinson's disease
S. Tisch, J.C. Rothwell, V. Di Lazzaro, M. Dileone, F. Capone, P. Profice, A. Insola, P. Mazzone (London, United Kingdom)

18 Clinimetric testing of the new UPDRS (MDS-UPDRS) vs. original version
C.G. Goetz, B.C. Tilley, S. Shaftman, G.T. Stebbins, S. Fahn, P. Martinez-Martín, W. Poewe, C. Sampaio, M.B. Stern, R. Dodel, B. Dubois, R. Holloway, J. Jankovic, J. Kulisevsky, A.E. Lang, A. Lees, S. Leurgans, P.A. LeWitt, D. Nyenhuis, C.W. Olanow, O. Rascol, A. Schrag, J. Teresi, J.J. van Hilten (Chicago, Illinois, USA)

19 The 2 adrenergic antagonist fipamezole prolongs the anti-parkinsonian actions of L-DOPA in the MPTP-lesioned macaque
T.H. Johnston, J.-M. Savola, S.H. Fox, J.M. Brotchie (Toronto, Ontario, Canada)

20 Topography of -synuclein pathology in Parkinson's disease
M.E. Kalaitzakis, M.B. Graeber, S.M. Gentleman, R.K.B. Pearce (London, United Kingdom)

21 Prospective comparison of weight gain and energy intake after subthalamic (STN), pallidal (GPi) and thalamic (VIM) deep brain stimulation (DBS) in Parkinson's disease
S. Blanchard, G. Drillet, P. Sauleau, S. Drapier, A.-S. Gillioz, T. Rouaud, J. Peron, M. Verin (Rennes, France)

22 Staging of lewy-related pathology in a community-based sample of dementia: Evidence for disease-dependent anatomic distribution
J.B. Leverenz, E.B. Larson, D. Vavrek, E.R. Peskind, J.D. Bowen, W.C. McCormick, L. Teri, W.A. Kukull, T.J. Montine, D.W. Tsuang (Seattle, Washington, USA)

23 Neuropsychological and psychiatric sequelae of deep-brain stimulation for Parkinson's disease – a randomized controlled multicenter study
C. Daniels, K. Witt, J. Reiff, P. Krack, M. Krause, K. Boetzel, A. Schnitzler, L. Wojtecki, R. Hilker, E. Kalbe, G.H. Schneider, A. Kupsch, G. Deuschl, for the German Parkinson Study Group, Neurostimulation Section (Kiel, Germany)

24 Neuropathological characteristics of Parkinson's disease associated with LRRK2 I2020T (Sagamihara family)
S. Ujiie, Y. Ogino, M. Ogino, T. Uchihara, S. Yagishita, K. Hasegawa, H. Kowa, F. Sakai (Sagamihara, Kanagawa, Japan)

Oral Platform Presentations 5602

Wednesday, June 6, 2007 - 2:30 PM - 4:30 PM
Room: Dolmabahce A
Chairs: Bulent Elibol, *Ankara, Turkey*
Heinz Reichmann, *Dresden, Germany*

Clinical Electrophysiology and Imaging

25 Probing a heterosynaptic manifestation of homeostatic plasticity in the intact human motor cortex
M. Poetter, S. Fischer, G. Deuschl, A. Quartarone, H. Siebner (Kiel, Germany)

26 Impaired temporal preparation in Parkinson's disease: Slow brain potential and oscillatory manifestations
P. Praamstra, P. Pope (Birmingham, United Kingdom)

27 Simultaneous EMG-fMRI; relating movement and brain activity in tremor
A.-F. van Rootselaar, N.M. Maurits, R. Renken, J.H.T.M. Koelman, J.M. Hoogduin, K.L. Leenders, M.A.J. Tijssen (Amsterdam, Netherlands)

28 Change in water diffusion MRI following repetitive transcranial magnetic stimulation
M. Abe, T. Mima, N. Sawamoto, S. Urayama, T. Aso, H. Fukuyama (Kyoto, Japan)

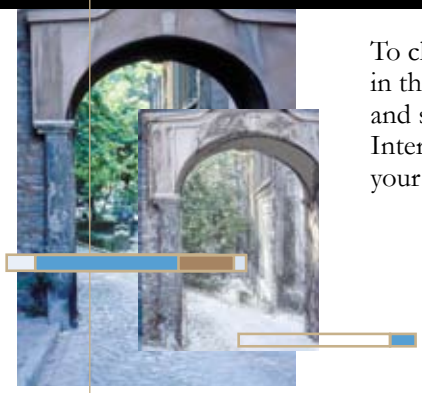
29 White matter changes in the diagnosis of presymptomatic neurodegenerative diseases: The example of Huntington's disease
S. Kloppel, B. Draganski, S.J. Tabrizi, R.S.J. Frackowiak (London, United Kingdom)

30 Hyposmia, midbrain hyperechogenity and Parkinson's disease: Findings in a population-based study
K. Seppi, H. Stockner, S. Kiechl, J. Schwaiger, M. Sawires, J. Willeit, W. Poewe (Innsbruck, Austria)

31 Firing patterns of STN in early stage PD patients implanted with DBS
C.H. Harrison, N.D. Manus, C.E. Gill, C.C. Kao, M.S. Remple, T.L. Davis, J.S. Neimat, P.E. Konrad, P.D. Charles (Nashville, Tennessee, USA)

32 **Connections between premotor and motor cortex in healthy subjects and in patients with Parkinson's disease**
A. Suppa, M. Bologna, C. Lorenzano, F. Gilio, M. Napoletani, A. Berardelli (Rome, Italy)

CME and Certificates of Attendance



To claim CME Credits or to receive a Certificate of Attendance for participation in this educational activity, International Congress participants must complete and submit an online CME Request Form following their participation in the International Congress. This can be done onsite at the CME Kiosk, or online from your own computer.

CME Kiosk Hours

7:00 AM – 7:00 PM Wednesday, June 6
7:00 AM – 6:00 PM Thursday, June 7
The CME Kiosk is located in the Main Lobby behind the registration area, near the stairs.

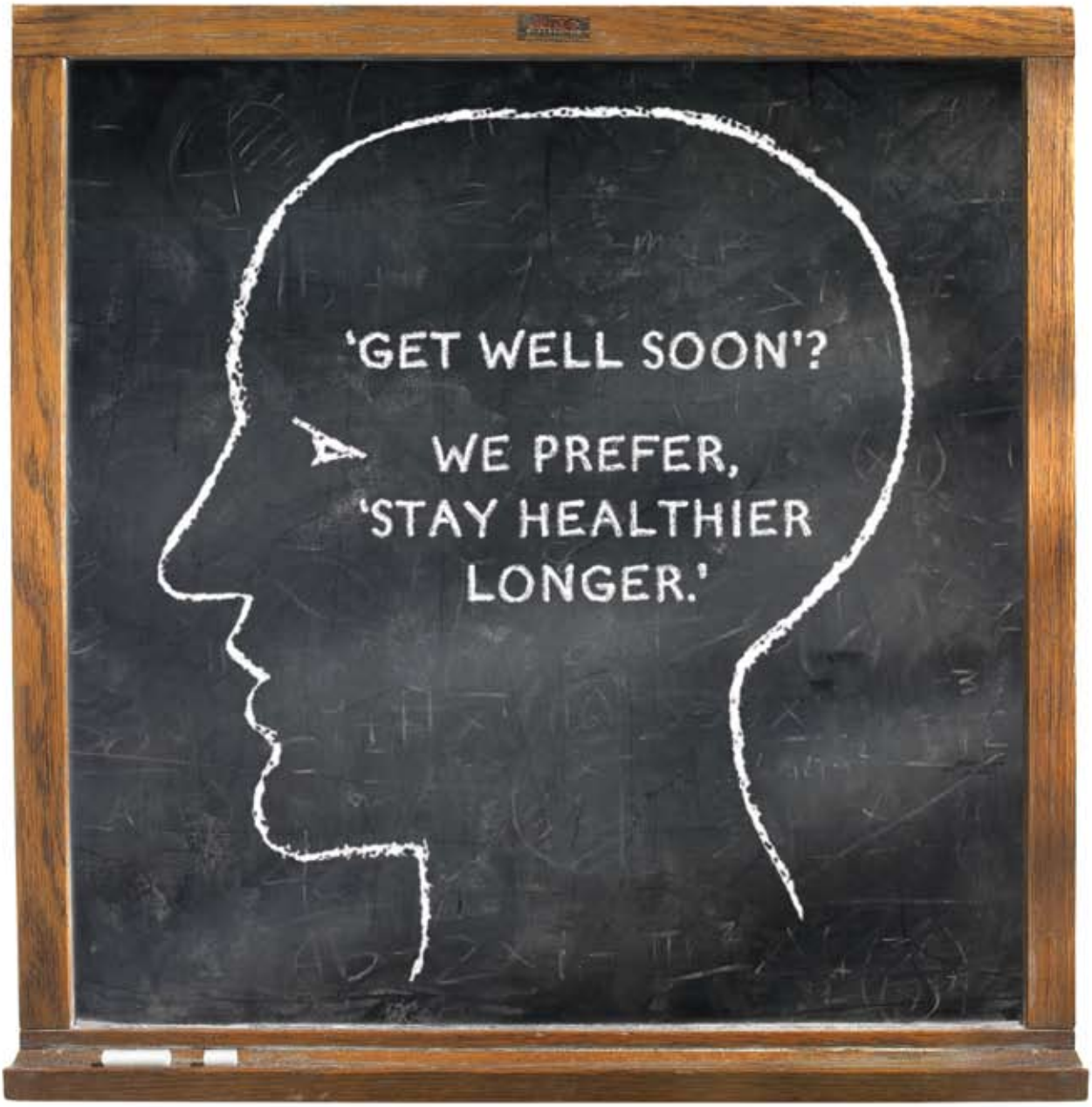
Online:

Visit www.movementdisorders.org/congress/congress07/cme and follow the on-screen instructions to claim your CME Credit or Certificate of Attendance. You can print the certificate directly from your computer or a send it to your personal e-mail address.

CME/Certificate of Attendance Online Instructions:

You will need your MDS ID Number and password to claim credit. This information can be found on the bottom of your registration confirmation form (found in your registration packet). It will also be e-mailed to all International Congress participants upon the completion of the 11th International Congress.

MDS-0407-024



Today, Pfizer is working toward solutions that mean a happier, healthier tomorrow for us all.

Pfizer is proud to support
The Movements Disorder Society's
11th International Congress of
Parkinson's Disease and Movement Disorders.

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Working for a healthier world™

Poster Session 1

Tuesday, June 5, 2007 - 12:30 PM - 2:30 PM
Rumeli Hall, Lower Level
Poster Viewing 9:00 a.m. to 4 p.m.
Authors Present 12:30 p.m. to 2:30 p.m.
Poster numbers 33-345 and Poster 683

Ataxia

Poster numbers 33-52

33 **High field proton MR spectroscopy of sporadic and hereditary spinocerebellar ataxias**
G. Oz, I. Iltis, D. Hutter, C.M. Gomez (Minneapolis, Minnesota, USA)

34 **Frequency of the MCP sign in FMR1 premutation carriers and FXTAS**
M.A. Leehey, D. Rubinstein, A.G. Brega, D. Hall, F. Tassone, L. Zhang, R. Hagerman, P.J. Hagerman, J. Grigsby (Denver, Colorado, USA)

35 **NARP-MILS syndrome caused by 8993T>G mitochondrial DNA mutation showing ragged-red fibers**
J. Youn, J.Y. Kim, W.Y. Lee, E.J. Chung, W.T. Yoon, Y.-L. Suh, C.S. Ki (Seoul, Republic of Korea)

36 **Gordon Holmes spinocerebellar ataxia with retinal dystrophy**
S.-J. Kim, E.J. Chung, J-H. Joo (Busan, Korea)

37 **Ataxin-2 localizes at the Endoplasmic reticulum and co-sediments with polysomes**
S. van de Loo, J. Nowock, R. Hilker, G. Auburger (Frankfurt/Main, Germany)

38 **A phase III double-blind, randomised, placebo-controlled study of the efficacy, safety and tolerability of idebenone in the treatment of Friedreich's ataxia patients**
P. Giunti, J. Gray, N.W. Wood (London, United Kingdom)

39 **The natural history of multiple system atrophy**
K. Arai, Y. Yoshiyama, K. Ogawara, C. Ishikawa, K. Ito (Chiba, Japan)

40 **Clinical relevance of "bulging eyes" for the differential diagnosis of spinocerebellar ataxias**
H.A.G. Teive, R.P. Munhoz, S. Raskin, W.O. Arruda, L.C. Werneck (Curitiba, PR, Brazil)

41 **Involuntary movements in ataxia-telangiectasia: Natural history and quantitative characteristics**
A.G. Shaikh, D.S. Zee, A.E. Meyer, H.M. Lederman, T.O. Crawford (Baltimore, Maryland, USA)

42 **Different metabolic pattern in SCA 1,2,3 and 6 in FDG-PET and correlation with clinical parameters**
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88 **Levels of the light subunit of neurofilament triplet protein in cerebrospinal fluid in Huntington's disease**
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93 **Chorea isolated on the both lower limbs associated with hyperglycemia**
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94 **Late-onset Huntington's disease in our movement disorder unit**
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95 **Bradykinesia in patients with history of sydenham's chorea**
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157 **Quantitative characteristics of limb tremor in cervical dystonia**
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158 **Disturbed topographic specific plasticity in cervical dystonia and blepharospasm**
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161 **A new locus for adult-onset Focal Idiopathic Torsion Dystonia**
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165 **Botulinum toxin for treatment of task-specific orofacial dystonia**
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166 **Survey of families presenting with late-onset focal idiopathic torsion dystonia in France**
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S.-T. Tsai, S.-H. Lin, S.-Z. Lin, S.-Y. Chen (Hualien, Taiwan)

294 **Regulation of alpha-synuclein phosphorylation in mammalian cells**
D.W. Miller, N.R. Patel, J. Clarimon, M. van der Brug, M.R. Cookson (Bethesda, Maryland, USA)

295 **Ropinirole 24-hour prolonged release as adjunct to L-dopa in patients with advanced Parkinson's disease – efficacy according to baseline depression score**
F. Stocchi, N.P. Stover, L. Giorgi (Roma, Italy)

296 **A case report of a deliberate overdose of ropinirole**
I. Ahmed (London, United Kingdom)

297 **Ability to arise from the floor in persons with Parkinson's disease**
J.A. Kraakevik, R.G. Blehm, S. O'Connor, C. Tepper, J.G. Nutt (Portland, Oregon, USA)

298 **The primary olfactory cortex in Parkinson's disease (PD) and incidental Lewy body disease (ILBD)**
L. Silveira-Moriyama, J.L. Holton, A. Kingsbury, H. Ayling, W. Sterlacci, W. Poewe, H. Maier, A.J. Lees, T. Revesz (London, United Kingdom)

299 **Cortical atrophy patterns in PSP and MSA patients detected via 3D cortical morphometry on MRI**
D. Tosun, S. Duchesne, A.W. Toga, C. Barillot, Y. Rolland, M. Vérin (Los Angeles, California, USA)

300 **Effect of adjunct rasagiline on dopaminergic and non-dopaminergic motor features of Parkinson's disease**
J.M. Rabey, C.J. Fitzer-Attas (Zerifin, Israel)

301 **Ropinirole 24-hour prolonged release in advanced Parkinson's disease: Relationship between treatment response and disease severity**
K.D. Sethi, F. Stocchi, L. Giorgi (Augusta, Georgia, USA)

302 **Does pregnancy affect the progression of Parkinson's disease?**
B. Robottom, J. Mullins, L.M. Shulman (Baltimore, Maryland, USA)

303 **Mild cognitive impairment in Parkinson's disease**
E. Stefanova, M. Petrovic, M. Svetel, N. Dragasevic, V. Kostic (Belgrade, Serbia)

304 **Tolcapone as an alternative to entacapone for adjunctive therapy in Parkinson's disease: An evidence-based efficacy comparison**
A.J. Lees, H. Achenbach (London, United Kingdom)

305 **Health-related quality of life in Parkinson's disease: Development and predictors during long-term disease progression**
E.B. Forsaa, K. Herlofson, T. Wentzel-Larsen, J.P. Larsen, G. Alves (Stavanger, Norway)

306 **Neurocircuitries associated with tremor and dyskinesia: Insights from an fMRI case study**
S. Sen, M. Lewis, X. Huang (Chapel Hill, North Carolina, USA)

307 **Ropinirole 24-hour prolonged release delays the onset of dyskinesia compared with carbidopa/levodopa in patients with Parkinson's disease treated with levodopa**
R.L. Watts, K.D. Sethi, R. Pahwa, B.E. Adams, N.L. Earl (Birmingham, Alabama, USA)

308 **Growth hormone stimulation test (CGHST) detects autonomic failure earlier than clinical autonomic testing in Parkinson's disease**
M. Ragothaman, S. Koshy, D.K. Subbakrishna, C.J. Mathias, U. Muthane (Bangalore, India)

309 **Pathological hypersexuality in Parkinson's disease: A clinician-rated survey and a working definition**
T. Thomsen, J.M. Miyasaki, M. Zurowski, M. De Sousa, R.M.A. De Bie, P. Wadia, G. Adeli, A.E. Lang, V. Voon (Toronto, Ontario, Canada)

310 **FP0011 extends the duration of the anti-parkinsonian actions of L-DOPA and reduces L-DOPA-induced dyskinesia in the MPTP-lesioned macaque model of Parkinson's disease**
J.M. Brotchie, T.H. Johnston, S.H. Fox, P. Zerr, F. Tiberghien, L. Bossi (Toronto, Ontario, Canada)

311 **Reflexive eye and arm movement in Parkinson's disease and the gap effect**
Y. Shirakura, M.M. MacAskill, D. Myall, T.J. Anderson (Christchurch, New Zealand)

312 **Non-motor symptoms in patients with incident and untreated Parkinson's disease – the Norwegian ParkWest study**
B. Mueller, G. Alves, K. Herlofson, I. Hoegen-Esch, W. Telstad, O.B. Tysnes, J.P. Larsen (Stavanger, Norway)

313 **A pilot data and analysis validity study on a NPF center of excellence database**
C.W. Garvan, C.E. Jacobson, R. Stephen, K.D. White, R.L. Rodriguez, K.D. Foote, H.H. Fernandez, M.S. Okun (Gainesville, Florida, USA)

314 **Can we modify the factors influencing selection of drug therapy in Parkinson's disease (PD)?**
A. Nasar, P. Dyer, C. Short, J. Cowling, W. Lynda, K. Turner, L. Wheelhouse, E. Howard (Bridlington, East Yorkshire, United Kingdom)

315 **Parkinson's disease and apomorphine – an Indian experience**
N. Surya (Mumbai, Maharashtra, India)

316 **Postural impairment in Parkinson's disease: Diagnostic utility of the "first trial effect"**
J.E. Visser, L. Janssen, C.M. Bastiaanse, G.F. Borm, J.E.J. Duysens, B.R. Bloem (Nijmegen, Netherlands)

317 **Evaluation of cognitive impairment in Parkinson's disease by computerized neuropsychological tests**
H. Shabtay, A.D. Korczyn (Tel Aviv, Israel)

318 **Weight gain post deep brain stimulation of the subthalamic nucleus in Parkinson's disease: Exploring possible causes**
H.U. Jorgensen, L. Simonsen, L.M. Werdelin, S. Rusborg, A. Lokkegaard (Copenhagen, Denmark)

319 **Clinical findings with Austrian LRRK2 mutation-subtype PD patient**
G. Daniel, T. Bruecke, Z. Alexander (Vienna, Austria)

320 **An integrated speech and physical therapy approach for Parkinson's disease: Training big and loud**
C.M. Fox, B.G. Farley, L.O. Ramig, D.F. McFarland (Denver, Colorado, USA)

321 **Clinical factors associated with freezing of gait in Parkinson's disease: A multidisciplinary approach**
A.A. Zylstra, A.F. Griffith, M.L. Glisky (Kirkland, Washington, USA)

322 **Toll-free helpline reveals diverse needs of Parkinson's disease community**
R.A. Elliott, J. Rosner, L. Pituch, P. Wiener, C.M. Evers (New York, New York, USA)

323 **Overlap of cognitive deficits in Parkinson's (PD) and Alzheimer's (AD) diseases: Potential use of safinamide**
T. Sharma, R. Anand, R. Hartman, S. Rossetti (Newark, Delaware, USA)

324 **Rasagiline is effective in treating patients with early Parkinson's disease, regardless of disease duration at treatment initiation (<1 year; 1 year)**
J.M. Bertoni, R. Pahwa (Omaha, Nebraska, USA)

325 **Evaluation of c-Abl tyrosine kinase mediated regulation of parkin as therapeutic target for Parkinson's disease**
S.Z. Imam, S. Sriram, H.S. Ko, D.W. Pearson, A.J. Valente, J.M. Savitt, E. Andres-Mateos, D.B. Trinkaus, O. Pletnikova, J.C. Troncoso, A. Yamamoto, P.J. Kahle, S.F. Ali, V.L. Dawson, S. Li, J.L. Roberts, T.M. Dawson, R.A. Clark (San Antonio, Texas, USA)

326 **Correlation between UPDRS-III scores and [11C]di hydrotetrabenazine (DTBZ) PET measures in early Parkinson's disease**
M. Wieler, J. Stoessl, W. Martin (Edmonton, Alberta, Canada)

327 **The pharmacokinetic profile of levodopa administered with and without tolcapone in patients with advanced PD**
D. De Lucrezia, F. Guadagni, N. Santucci, L. Vacca, F. Stocchi (Rome, Italy)

328 **Development and evaluation of a community-based exercise programme for people with Parkinson's disease**
K.J.E. Reinikka, A. MacLeod, M. Johnson, M. Bedard, M. Jog (Thunder Bay, Ontario, Canada)

329 **The Norwegian ParkWest study – study design and incidence calculations**
G. Alves, B. Mueller, K. Herlofson, I. Hoegen-Esch, W. Telstad, O.B. Tysnes, J.P. Larsen (Stavanger, Norway)

330 **Specificity and sensitivity of transcranial ultrasound in the differential diagnosis of Parkinson's disease**
A. Gaenslen, B. Unmuth, I. Liepelt, A. Di Santo, K. Schweitzer, J. Godau, T. Gasser, M. Reimold, D. Berg (Tubingen, Germany)

331 **Improved compliance with levodopa/carbidopa/entacapone (L/C/E; Stalevo®) vs levodopa/carbidopa and entacapone (L/C + E) as separate tablets in Parkinson's disease (PD)**
T.E. Delea, S.K. Thomas, M. Hagiwara, L. Mancione, M. Stacy (Brookline, Massachusetts, USA)

332 **Effects of pramipexole on tremor and anxiety in de novo patients with Parkinson's disease**
H. Takahashi, F. Yoshii, K. Fujimoto, H. Chiba, R. Kumazawa, S. Kobori, S. Takagi (Isehara, Kanagawa, Japan)

333 **Screening for LRRK2 mutations in UK familial Parkinson's disease patients**
A.J. Lewthwaite, T.D. Lambert, N.W. Wood, D.J. Nicholl, K.E. Morrison (Birmingham, West Midlands, United Kingdom)

334 **Patient report of initial symptom in Parkinson's disease, ataxia, and essential tremor**
D.A. Hall, M.A. Leehey, K. Howard, P. Hagerman, G. Zerbe, T. Byers (Denver, Colorado, USA)

335 **Neurophysiological correlates of Parkinsonian dyskinesias in subthalamic oscillatory activity**
S. Marceglia, A. Leone, G. Foffani, F. Cogiamanian, S. Mrakic-Sposta, F. Tamma, E. Caputo, S. Barbieri, A. Priori (Milan, Italy)

336 **Adherence to antiparkinson medication in a multi-centre European study**
D. Grosset, A. Antonini, M. Canesi, G. Pezzoli, A.J. Lees, K. Shaw, E. Cubo, P. Martinez-Martin, O.O. Rascol, L. Negres-Pages, A. Senard, J. Schwarz, K. Strecker, H. Reichmann, A. Storch, M. Löhle, K. Grosset (Glasgow, United Kingdom)

337 **Safety of Zydis selegiline orally disintegrating tablet (ODT) with concomitant antidepressant therapy in Parkinson's disease (PD)**
M.F. Lew, K.D. Sethi, G. Kricorian (Augusta, Georgia, USA)

338 **Switch from an oral dopamine agonist to rotigotine transdermal patch in Parkinson's disease**
P.A. LeWitt, J.M. Patton, D.G. MacMahon, J. Jankovic (Southfield, Michigan, USA)

339 **Vascular events in Parkinson's disease with hyperhomocysteinemia**
R. Ribacoba, M. Menendez, J.R. Virgili, G. Jimenez, C. Huerta, V. De la Vega (Mieres, Asturias, Spain)

340 **Safety of concomitant therapy with rasagiline and antidepressants in Parkinson's disease**
M. Panisset, S. Schwid, W. Ondo, C. Fitzer-Attas, J.J. Chen (Montreal, Quebec, Canada)

341 **Defining features of subsyndromal depression in Parkinson's disease**
D.A. Nation, H.L. Katzen, R.A. Rodriguez, J.A. Ledon, A. Capano, S. Papapetropoulos, B.V. Gallo, J.R. Jagid, B.E. Levin (Miami, Florida, USA)

342 **Quality of life influenced by presence of patients' with Parkinson's disease relatives**
S.M. Nica, I.E.-V. Davidescu, G. Mihailescu (Bucharest, Romania)

343 **The effects of loudness and noise on speech intelligibility in Parkinson's disease**
A. Halpern, J. Spielman, L. Ramig, J. Cable, I. Panzer, A. Sharpley (Denver, Colorado, USA)

344 **What looks like a duck and sounds like a duck, may not really be a duck: Acute hemiparesis 3 weeks after DBS**
Q.A. Shamim-Uzzaman, E.A. Shamim, C.G. Kalhorn, A.S. Mandir, F.L. Pagan (Washington, District of Columbia, USA)

345 **Complications of spinal surgery in Parkinson's disease: Case reports of 3 patients**
E. Wolf, K. Mair, A. Muigg, K. Twerdy, W. Poewe (Innsbruck, Tirol, Austria)

Poster Session 2

Wednesday, June 6, 2007 - 12:30 PM - 2:30 PM
Rumeli Hall, Lower Level
Poster Viewing 9:00 a.m. to 4:00 p.m.
Authors Present 12:30 p.m. to 2:30 p.m.
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Drug-induced Movement Disorders

Poster numbers 346-361

346 **Veralipride: A case report of irreversible dystonia**
M.T. Rivas, J. Pascual, A. Sesar (Santiago de Compostela, Spain)

347 **Evidence that lithium protects against tardive dyskinesia: The Curacao Extrapyramidal Syndromes Study VI**
P.N. van Harten, H.W. Hoek, G.E. Matroos, J. van Os (Amersfoort, Netherlands)

348 **Ephedrone-induced Parkinsonism: Clinico-neuroimaging study**
Y. Sanotsky, M. Selikhova, L. Fedoryshyn, Y. Matviyenko, I. Komnatska, M. Kyrylchuk, A. Friedman, L. Krolicki, A.J. Lees (Moscow, Russian Federation)

349 **Reversible parkinsonism induced by short-term treatment with valproate in Alexander's disease**
G. Sechi, K.S. Paulus, G.A. Cocco, G.M. Pes, G. Sau, V. Agnetti (Sassari, Italy)

350 **Parkinsonism induced by mefloquine**
M.G. Senol, M. Saracoglu (Istanbul, Turkey)

351 **Tardive eating dystonia: A case report**
Y. Kutukcu, S. Bek, F. Ozgen, Z. Odabasi (Ankara, Turkey)

352 **Oromandibulary dyskinesia and dystonia with khat chewers**
L. Harms, F. Sporkert, H. Alwarith, F. Pragst, L. Dögnitz (Berlin, Germany)

353 **The course of tardive dystonia: A population based study – the Curacao Extrapyramidal Study VIII**
P.N. van Harten, G.E. Matroos, J. van Os (Amersfoort, Netherlands)

354 **Clinical features of motor disturbances at toxic encephalopathy provoked by using of substitute psychoactive substances**
N.V. Fedorova, N. Amosova, T. Ismailova (Moscow, Russian Federation)

355 **Tardive antidepressant drug-induced dyskinesia: Report on 5 cases and search for MRI predictors**
P.J. Blanchet, N. Ouatik, Y. Kuznetsov, A. Khiat, Y. Boulanger (Montreal, Quebec, Canada)

356 **Effects of repetitive transcranial magnetic stimulation on levodopa induced dyskinesias and motor performance in Parkinson's disease**
S. Sayin, R. Cakmur, E. Yaka, G. Yener, F. Uzunel (Izmir, Turkey)

357 **Sleep and periodic leg movements in schizophrenic patients with neuroleptic-induced parkinsonism**
T.C. Wetter, S. Fulda (Munich, Germany)

358 **Movement disorder caused by injections of manganese containing compounds**
I. Khatiashvili, K. Akhvlediani, M. Megrelishvili, M. Janelidze, N. Lobjanidze (Tbilisi, Georgia)

359 **Deep brain stimulation for tardive dyskinesia and akathisia**
C. Kenney, R.L. Barbano, J.K. Sheffield, J. Jankovic (Houston, Texas, USA)

360 **Acute dystonia induced by adding midodrine to Perphenazine**
A. Castrioto, L. Pierguidi, N. Tambasco, A. Rossi, P. Calabresi (Perugia, Italy)

361 **Capecitabine-induced oromandibular dystonia**
P.K. Manharlal, C.S. Pin, L.Y. Long, T.Y. Albert, S.S. Ju, P. Ratnagopal (Singapore, Singapore)

Dystonia

Poster numbers 362-403

362 **Extreme task specificity in writer's cramps**
E.A. Shamim, J.M. Savitt, H.A. Jinnah, M. Hallett (Bethesda, Maryland, USA)

363 **Chronic low back pain related to idiopathic extensor truncal dystonia**
G. Sau, V. Agnetti, E. Coco, B. Nieddu, I. Magnano, I. Aiello (Sassari, SS, Italy)

364 **Mental rotation of body parts in DYT1 carriers**
M. Fiorio, M. Gambarin, C. Stanzani, E.M. Valente, G. Defazio, G. Moretto, M. Loi, P. Soliveri, N. Nardocci, A. Albanese, A. Fiaschi, M. Tinazzi (Verona, Italy)

365 **A slow flow arterio-venous malformation as a cause of a neuro-psychiatric syndorme comprising hemi-dystonia and behavioral changes**
M.A. Sierra-Beltrán, U. Rodrìguez-Ortiz, M.S. Rodrìguez (Mexico City, DF, Mexico)

366 **Improvement of treatment effect with a higher dilution of botulinum toxin type A: Results of a controlled blepharospasm study**
S. Grafe, G. Comes, P. Roggenkaemper (Frankfurt, Germany)

367 **Tonic versus phasic cervical dystonia: Persistence and influence of botulinum toxin treatment on dystonic type**
D.D. Duane, K.B. Zebatto, J.M. Johnson, R.L. Owen, J.H. Flutie, K.A. Shunk (Scottsdale, Arizona, USA)

368 **Changes of perfusion pattern using ECD-SPECT in patients with primary focal or generalized dystonia**
N. Kawashima, E. Horiuchi, K. Hasegawa, Y. Ujihara, Y. Hasegawa (Fujisawa, Japan)

369 **Neuropathology in idiopathic cervical dystonia**
M.C. Zerrate, C.A. Pardo, H.A. Jinnah (Baltimore, Maryland, USA)

370 **Neuropathology of primary dystonia unrelated to DYT1 mutations**
J.L. Holton, S.A. Schneider, S. Gandhi, T. Ganesharajah, C. Strand, P. Shashidharan, J. Barreto, N.W. Wood, A.J. Lees, K.P. Bhatia, T. Revesz (London, United Kingdom)

371 **Repetitive TMS of the somatosensory cortex improves writer's cramp**
R. Jech, P. Havrankova, N.D. Walker, J. Vymazal, E. Ruzicka (Prague, Czech Republic)

372 **Longitudinal effects of pallidal stimulation on motor cortex function in dystonia**
S. Tisch, D. Ruge, P. Limousin, J. Hariz, K.P. Bhatia, N.P. Quinn, L. Zrinzo, M. Jahanshahi, J.C. Rothwell (London, United Kingdom)

373 **Clinical characteristics of dystonia in a Movement Disorder Centre in Venezuela**
M. Gallardo, A. Soto, G. Orozco, M. Camacaro, G. Ramirez, R. Weiser, L. Vink (Caracas, Miranda, Venezuela)

374 **Homocystinuria and dystonia – case presentation**
O. Akan, S. Ozbakir, S. Ozturk, S. Ozturk, A. Findik (Ankara, Turkey)

375 **A novel mutation (64-65DelGGInsAACC(G21fsX 66)) in the GTP cyclohydrolase 1 gene causing Segawa's disease (DYT5 dystonia)**
M. von Mering, H. Gabriel, G.F. Hoffmann, A. Storch (Dresden, Germany)

376 **Quality of life in patients with different types of focal dystonias in Serbia**
T.D. Pekmezovic, M. Svetel, N. Ivanovic, N. Dragasevic, I. Petrovic, V.S. Kostic (Belgrade, Serbia)

377 **Clinical genetics of musician's dystonia**
A. Schmidt, H.-C. Jabusch, J. Hagenah, L. Enders, N. Brüggemann, K. Lohmann, R. Saunders-Pullman, S.B. Bressman, P.L. Kramer, A. Münchau, E. Altenmüller, C. Klein (Hannover, Germany)

378 **Low-frequency rTMS of the premotor cortex in pantothenate kinase-associated neurodegenerative disease**
V. Mylius, A. Gerstner, A. Leonhardt, D. Hellwig, F. Rosenow, W.H. Oertel (Marburg, Germany)

379 **Autosomal dominant myoclonus-dystonia and Tourette syndrome in a family without linkage to the SGCE gene**
M. Orth, A. Djarmati, T. Bäumer, S. Winkler, A. Grünewald, K. Lohmann-Hedrich, K. Kabakci, J. Hagenah, C. Klein, A. Münchau (Hamburg, Germany)

380 **Deep brain stimulation of the globus pallidus internus (Gpi-DBS) in a patient with generalized dystonia due to tyrosine hydroxylase deficiency**
A. Kaelin-Lang, J. Abu-Isa, M. Schuepbach, A. Stibal (Bern, Switzerland)

381 **The entitity of jaw tremor and dystonia**
S.A. Schneider, K.P. Bhatia (London, United Kingdom)

382 **Early dystonia in probable Creutzfeldt-Jakob disease with diffusion weighted MR images**
S.-H. Lee, S.-B. Koh, K.-W. Park, D.-H. Lee (Seoul, Korea)

383 **Long-term treatment of cervical dystonia with botulinum toxin A – retrospective assessment of the clinical and quality of life impact in patients treated for 10 years**
M. Bares, I. Rektorova, M. Balaz, H. Streitova, E. Minks, P. Kanovsky, I. Rektor (Brno, Czech Republic)

384 **Can blepharospasm herald multiple sclerosis?**
G. Loria, F. Soleti, S. Servidei, A. Evoli, A.P. Batocchi, A.R. Bentivoglio (Rome, Italy)

385 **Deep brain stimulation in dystono-dyskinetic syndromes secondary to mitochondrial diseases: Predictive value of 18F-FDG PET**
L. Cif, F. Comte, B. Biolsi, H. Elfertit, S. Gavarini, A. Saux, X. Vasques, P. Coubes (Montpellier, France)

386 **Case reports: Blepharospasmus in Hashimoto disease**
M. Arnaoutoglou, E. Koutsouraki, V. Costa, E. Avdelidou, S.A. Kapsali, E. Kalliolia, C. Karamanidis, N. Arnaoutoglou, G. Spanos, G. Xiromerisiou, S.I. Baloyannis (Thessaloniki, Greece)

387 **The characteristics of adult onset Segawa disease**
M. Segawa, Y. Nomura, K. Kimura, R. Hanajima (Tokyo, Japan)

388 **No difference in efficacy between Xeomin® and Botox® in the treatment of cervical dystonia – a detailed subgroup analysis**
H. Hefter, R. Benecke, G. Comes, S. Grafe (Duesseldorf, Germany)

389 **A retrospective study of Botox versus Dysport in patients with movement disorders**
A.L.Z. Rosso, D.H. Nicaretta, J.P. Mattos, S.A.P. Novis (Rio de Janeiro, RJ, Brazil)

390 **Post-traumatic adult-onset focal dystonia: A retrospective study of six consecutive cases**
R. Riemer, Y.-L. Zheng, H. Luo, C. Lindsey, V. Wheelock, L. Zhang (Sacramento, California, USA)

391 **Secondary dystonia related to celiac disease**
A.L. Diamond, P. Agarwal, V. Segro (Englewood, Colorado, USA)

392 **Behavioural abnormalities in DRD**
I. Trender-Gerhard, P. Mir, M. Edwards, M. Sweeney, L. Majahi, A. Gerhard, N. Wood, K. Bhatia (London, United Kingdom)

393 **Atypical phenotype in DYT1 dystonia with paroxysmal dystonia**
B. Biolsi, L. Cif, S. Gil Robles, S. Gavarini, X. Vasques, S. Plagnol, P. Coubes (Montpellier, France)

394 **Immobilization followed by motor training is an effective therapeutical approach in patients with writer's cramp**
K.E. Zeuner, M. Peller, A. Knutzen, I. Holler, M. Hallett, G. Deuschl, H.R. Siebner (Kiel, Germany)

395 **Abnormal low frequency drive in Myoclonus-Dystonia patients correlates with presence of dystonia**
E.M.J. Foncke, L.J. Bour, J. van der Meer, J.H.T.M. Koelman, M.A.J. Tijssen (Amsterdam, Netherlands)

396 **Clinical and poly-electromyographic diagnostics of facial movement disorders and their treatment with botulinum toxin**
G. Reichel, A. Stenner, W. Hermann (Zwickau, Germany)

397 **Knowledge and perception of dystonia: A comparison among various religions and ethnicities in the state of Florida**
V. Gosein, M.P. Silverstein, C.E. Jacobson IV, M.S. Okun, R.L. Rodriguez, H.H. Fernandez (Gainesville, Florida, USA)

398 **Sensorimotor cortex hypoactivation during writing in writer's cramp: An event-related fMRI study**
P. Havrankova, R. Jech, N.D. Walker, J. Vymazal, E. Ruzicka (Prague, Czech Republic)

399 **Is it always necessary to apply botulinum toxin into the lower facial muscles in hemifacial spasm? A randomized, single-blinded, crossover trial**
B. Donmez Colakoglu, R. Cakmur, F. Uzunel (Izmir, Turkey)

400 **Short intracortical inhibition (SICI) during different phases of movement in patients with focal hand dystonia**
S. Beck, S. Pirio Richardson, M. Hallett (Bethesda, Maryland, USA)

401 **A Multi-centre, open-label, multiple-dose, dose-escalation, safety and tolerability study of Botulinum Toxin Type B in patients with cervical dystonia**
E.J. Pappert (San Antonio, Texas, USA)

402 **Experience of treatment focal dystonic hyperkinesis with botulinic toxin in center neurology and neurorehabilitation FSE "Siberian Regional Medical Center"**
D.V. Pokhabov, V.G. Abramov (Krasnoyarsk, Siberia, Russian Federation)

403 **Wilson's disease facies – a distinctive clinical sign**
A. Aggarwal, A. Nagral, M. Bhatt (Mumbai, Maharashtra, India)

Gene and Cell-Based Therapies
Poster numbers 404-407

404 **Normalization of 6-hydroxydopamine-induced rotational behavior by transplantation of dermal fibroblasts**
J.P.M. Finberg, Y. Feld, Z. Gluzman, S. Marom, O. Mohsen, M. Reshef (Haifa, Israel)

405 **Preliminary results of an open-label, dose-escalation, safety study of AADC gene transfer therapy for Parkinson's disease**
M.J. Aminoff, C.W. Christine, K. Bankiewicz, P.A. Starr, P. Larson, R. Mah, J.L. Eberling, W.J. Jagust (San Francisco, California, USA)

406 **Suicide-gene mediated ablation of Oct4 expressing cells for ES-cell based cell replacement therapy in Parkinson's disease**
J. Schindehuette, P.C. Baier, T. Kuhlmann, C. Trenkwalder, W. Paulus, A. Mansouri (Goettingen, Lower Saxony, Germany)

407 **Transplantation of bone marrow stromal cells containing the neurturin gene in rat model of Parkinson's disease**
M. Ye, X.J. Wang, Y.H. Zhang, S.D. Chen (Nanjing, China)

Genetics

Poster numbers 408-444

408 Low prevalence of PANK2 mutations in Brazilian cases of neurodegeneration with brain iron accumulation
S. Camargos, F. Cardoso, J.G. Giannetti, A.L. Teixeira, Jr, D.P. Maia, M. Cunninham, A.J. Lees, J. Hardy, A. Singleton (Belo Horizonte, Minas Gerais, Brazil)

409 New insights into SNCA duplication in a French Parkinson's disease pedigree. Relevance for genetic and phenotypic evaluations
E. Le Rhun, L. Larvor, K. Dujardin, A. Emptaz, E. Mutez, V. Mouroux, J. Andrieux, F. Lepretre, M. Steinling, L. Defebvre, A. Destee, M.-C. Chartier-Harlin (Lille, France)

410 Glucocerebrosidase mutations in a patients with sporadic Parkinson's disease from Taiwan
S.G. Ziegler, U. Gutti, M.J. Eblan, K. Hruska, O. Goker-Alpan, E. Sidransky (Bethesda, Maryland, USA)

411 High prevalence of LRRK2 mutations in familial and sporadic Parkinson's disease in Portugal
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413 Case-control analysis of glucocerebrosidase gene mutations in Parkinson's disease and dementia with Lewy bodies
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414 LRRK2 mutations in patients with Parkinson's disease in southern Spain
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421 Familial Parkinsonism with double mutations of Parkin and PINK1
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422 Do Ashkenazi Jew patients with Parkinson's disease want to be acquainted about their G2019S mutation status in the LRRK2 gene?
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510 **The predictors of fatigue in Parkinson's disease: Results from a UK-German study of 135 cases**
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511 **Prevalence of behavioural symptoms in PSP and MSA: Evidence from NNIPPS (Neuroprotection and Natural History in Parkinson's Plus Syndromes)**
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520 **Disturbance of automatic auditory change detection in dementia associated with Parkinson's disease: A mismatch negativity study**
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526 **An acceleration of rhythmic finger tapping in patients with Parkinson's disease**
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527 **Knowledge of disease among patients with hemifacial spasm**
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528 **Symptomatic REM sleep behavior disorder in patients with Parkinson's disease over eight years**
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529 **Psychiatric comorbidities in a Brazilian sample of early-onset Parkinson's disease**
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530 **Cognitive and motor mediators of the changes in gait stability during dual tasking in healthy older adults**
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531 **Constipation in Parkinson's disease: A literature review**
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532 **Safe and efficacious treatment of sialorrhea related to Parkinson's disease, parkinsonism and other neurological diseases with blind single transdermical botulinum toxin injections into the parotid glands: Clinical experience with 58 patients**
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533 **Intimate partner abuse in movement disorders and the role of health care professionals**
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534 **Dopamine dysregulation syndrome, impulse control disorders and subthalamic nucleus deep brain stimulation: A case series and literature review**
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535 **The behavioural changes in progressive supranuclear palsy (PSP) are not just a mild form of frontotemporal dementia (FTD)**
T.H. Bak, J.R. Hodges (Edinburgh, Scotland, United Kingdom)

536 **Pain in Parkinson's disease – pharmacoepidemiological research into the consumption of analgesic drugs**
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537 **Searching for subtle sleep abnormalities by polysomnography in early Parkinson's disease: A prospective case-control study**
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538 **Neuropsychological predictors of hallucinations in Parkinson's disease: Cognitive and perceptual biases**
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539 **Prevalence of non-motor symptoms in idiopathic Parkinson's disease. The PRIAMO study**
C. Colosimo, PRIAMO Study Group, Italy (Rome, Italy)

540 **Improvement of hyperdopaminergic behaviors by subthalamic nucleus (STN) stimulation**
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541 **Validation of the CAMCOG neuropsychological assessment in Parkinson's disease**
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542 **Altered pain and pain tolerance thresholds in Parkinson's disease – a result of multifocal degeneration?**
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543 **Executive functioning in early-onset Parkinson's disease**
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545 **Correlations of initial 'mentation' rating in UPDRS and progression of motor and cognitive functions in Parkinson's disease**
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546 **Risk factors of falls related to balance and gait disorders in Parkinson's disease – prospective study**
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547 **Elevated prevalence of malignant melanoma in Israeli patients with Parkinson's disease**
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548 **The effect of mechanical vibration in Parkinson's disease (PD): A randomized blind controlled trial**
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549 **The neuropathological substrate of the dementia of Parkinson's disease**
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550 **Outcome of acute ischemic stroke in hospitalized Parkinson's disease patients**
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551 **Side and symptom of disease onset is related to lifespan in Parkinson's disease**
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552 **Weight loss and disease progression in Parkinson's disease**
Y. Tsuboi, Y. Baba, H. Inoue, T. Kobayashi, T. Yamada (Fukuoka, Japan)

553 **Sleep disturbances in Parkinson's disease patients**
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554 **Training and placebo effects outweigh effects of single session conventional rTMS and theta burst stimulation in PD patients**
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555 **Diversity in Parkinson's disease prevalence among elder South Carolinians**
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556 **Parkinson's disease: Atypical improve of gait disturbances. Case report**
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557 **Statin use and the risk of Parkinson's disease**
A.D. Wahner, J.M. Bronstein, Y.M. Bordelon, B. Ritz (Los Angeles, California, USA)

558 **Biceps brachii myoelectric manifestations in medicated Parkinson's disease patients**
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559 **Clinical evaluation of asymptomatic G2019S LRRK2 mutation carriers and assessment of factors influencing LRRK2 related Parkinson's disease expression (the ASAP LRRK2 study)**
C. Gaig, E. Tolosa, M. Ezquerra, A. Rojo, M. Aguilar, J. Hernandez, F. Miquel, M. Calopa, P. Pastor (Barcelona, Spain)

560 **Parkinson's disease in boxers: A link or a myth?**
P. Lolekha, K. Phanthumchinda, R. Bhidayasiri (Bangkok, Thailand)

561 **The mutant C-allele of the variant MTHFR c.1298A>C (E429A) is associated with later age of onset in Parkinson's disease and multiple system atrophy and provides resistance against oxidative stress in vitro**
M. Linnebank, U. Wüllner (Bonn, Germany)

562 **Is there a correlation between clinical presentation and body mass index in Parkinson's disease?**
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563 **Enhanced lymphocyte apoptosis in treated and untreated Parkinson patients**
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564 **Diagnostic accuracy of SPECT in parkinsonian syndromes: A meta-analysis**
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565 **Treadmill training improves functional ability and cardiopulmonary capacity in stable Parkinson's disease**
E. Pelosin, E. Faelli, F. Lofrano, L. Marinelli, M. Bove, P. Ruggeri, G. Abbruzzese (Genova, Italy)

566 **Clinical predictors of on-road driving performance in patients with Parkinson's disease**
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567 **Is there a morphological substrate of parkinsonian rest tremor a voxel-based morphometry study**
D. Benninger, S. Thees, C.L. Bassetti, S.S. Kollias, D. Waldvogel (Zurich, Switzerland)

568 **Non motor symptoms in untreated patients with Parkinson's disease in Tanzania**
C.L. Dotchin, R.W. Walker (North Shields, Tyne and Wear, United Kingdom)

569 **Use of clozapine in Brazilian patients with Parkinson's disease**
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570 **Therapeutic effect of neuropeptide PACAP27 on MPTP-induced parkinsonism in mice**
G. Wang, Y.-Y. Tan, X.-K. Sun, R.-J. Ren, H.-Y. Zhou, S.-D. Chen (Shanghai, China)

571 **Sleep disturbances in patients with Parkinson's disease**
T. Smiljkovic, S. Kostic, V. Dedic, J. Potic, V. Nikolic (Belgrade, Serbia)

572 **Rotigotine transdermal patch as adjunct to levodopa in the treatment of advanced-stage Parkinson's patients**
P.A. LeWitt, K.E. Lyons, R. Pahwa (Southfield, Michigan, USA)

573 **Quantitative motor tests for early detection of motor dysfunction in Parkinson's disease**
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574 **Detection of increased echogenicity in the substantia nigra in a large family with homo- and heterozygous PINK1 mutations**
J.M. Hagenah, G. Seidel, N. Brüggemann, A. Djarmati, K. Lohmann, A. Sprenger, C. Klein (Luebeck, Germany)

575 **Metric attributes of a quantitative motor test battery for practical and scientific use in Parkinson's disease**
C.A. Haaxma, B.R. Bloem, G.F. Borm, M.W.I.M. Horstink (Nijmegen, Netherlands)

576 **The evaluation of tau-protein in the CSF in patients suffering from Parkinson's disease**
H. Vranova, P. Kanovsky, M. Nevrly, J. Mares, P. Hlustik (Olomouc, Czech Republic)

577 **Levodopa therapy is associated with reduced body weight in advanced Parkinson's disease patients**
C.G. Bachmann, A. Zapf, E. Brunner, C. Trenkwalder (Goettingen, Germany)

578 **The relationship between antiparkinsonian therapy and sleep disturbances in patients with moderate stage of Parkinson's disease**
M. Boczarska-Jedynak, B. Jasinska-Myga, G.A. Klodowska-Duda, M. Arkuszewski, G. Opala (Katowice, Poland)

579 **The pesticide of rotenone selectively enhances voltage-gated potassium channels and endogenous PACAP mRNA expression in neuronal differentiated PC12 cells**
G. Wang, H.-Y. Zhou, S.-D. Chen (Shanghai, China)

580 **Genetic polymorphism of thymidylate synthase enhancer region (TSER) in patients with idiopathic Parkinson's disease**
W.-C. Kim, K.-K. Kim, H.-S. Kim, Y.-H. Koo, O.-J. Kim, M.-S. Lee (Seong-Nam City, Gyeong-Gi Do, Korea)

581 **The PARS study: Reaching for pre-motor Parkinson's disease**
D.L. Jennings, A. Siderowf, M.B. Stern, K. Marek (New Haven, Connecticut, USA)

582 **Early-onset Parkinson's disease and depression**
D.C. Bertucci Filho, H.A.G. Teive, R.P. Munhoz, N. Becker, L.C. Werneck (Curitiba, PR, Brazil)

583 **Is there an increased risk of young onset Parkinson's disease in patients with a history of poliomyelitis?**
P. Agarwal, A.L. Diamond, V.R. Segro (Englewood, Colorado, USA)

584 **A study of clinical effect of STN-DBS for Parkinson's disease in younger and elder patients**
H. Saiki, H. Toda, M. Nishida, S. Kaneko, S. Kosaka, M. Ishikawa, H. Itoh, S. Matsumoto (Osaka, Japan)

585 **Worsening of motor symptoms and gynecomastia during spironolactone treatment in a patient with Parkinson's disease and congestive heart failure**
H.A. Teive, R.P. Munhoz (Curitiba, Brazil)

586 **Studying emergence of behavioral changes during one month of intensive voice treatment (LSVT) in a person with Parkinson's disease**
J. Spielman, A. Halpern, L. Ramig, C. Fox (Denver, Colorado, USA)

587 **Dopamine dysregulation syndrome: Impact of subthalamic chronic stimulation**
T. Witjas, J. Régis, M. Delphini, J.C. Péragut, J.P. Azulay (Marseille, France)

588 **Does somatization have a role in the manifestation of the non-motor symptoms of Parkinson's disease?**
H. Murck, M. Stacy, K. Kroenke (Hanover, New Jersey, USA)

589 **Parkinson's disease; relationship between neuroinflammation and cognition**
A. Bora Tokcaer (Ankara, Turkey)

590 **Diplopia in Parkinson's disease: A clinical and optometric study**
L. Bye, K. Ray Chaudhuri (London, United Kingdom)

591 **End-of-dose blepharospasm and its relationship to the dose of levodopa: Observation in a patient with Parkinson's disease**
P.Kr. Pal, A. De Souza, P.S. Bindu (Bangalore, Karnataka, India)

592 **Factors that impact quality of life in patients with Parkinson's disease**
T. Simuni, D. Breslow, L. Vainio, S. Miskevics, C. Zadikoff, F. Weaver (Chicago, Illinois, USA)

593 **PRODEST study: Depressive symptoms in Parkinson's disease**
P. Barone, C.G. Goetz, J. Houben, K. Juergen, A.F.G. Leentjens, W. Poewe, O.O. Rascol, H. Reichmann, A.H. Schapira, E. Tolosa (Naples, Italy)

594 **Cognitive function assessment in idiopathic Parkinson's disease patients. Control study with normal subjects**
M.R. Piovezan, H.A.G. Teive, E.J. Piovesan, M.J. Maeder, L.C. Werneck (Curitiba, PR, Brazil)

595 **Hypersexuality in Parkinson's disease: Differences in associated factors may lead to the expression of different impulse control behaviors**
V. Voon, T. Thompsen, J.M. Miyasaki, M. de Souza, M. Zurowski (Bethesda, Maryland, USA)

596 **Decreased plasma alpha synculein levels in patients with Parkinson's disease**
A. Neumayer, R. Reindl, K. Seppi, E. Wolf, S. Boesch, H. Stockner, M. Kogler, A. Zangerl, K. Mair, G.K. Wenning, M. Stampfer-Kountchev, W. Poewe (Innsbruck, Tirol, Austria)

597 **Evaluation of a multidisciplinary daycare unit for patients with Parkinson's disease (PD)**
M.A. van der Marck, B.R. Bloem, M.L. van Nimwegen, M.A.M. Schmidt, M. Munneke (Nijmegen, Netherlands)

598 **Adult human stem cells differentiated into astrocytes: Therapeutic potential for Parkinson's disease**
M.B. Stroomza, Y. Barhom, Y. Levy, O. Karpov, S. Bulvik, E. Melamed, D. Offen (Petah-Tikva, Israel)

599 **The influence of walking speed on lower extremity JOINT TORQUE asymmetry in persons with early Parkinson's disease**
J. Song, G.M. Petzinger, B. Fisher, J. Gordon, G.J. Salem (Los Angeles, California, USA)

600 **Molecular mechanism of levo-dopa induced dyskinesia in Parkinson's disease**
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601 **Clinical impact of fatigue in Parkinson's disease**
V.K. Metta, A. Matouskova, R. Mitchell-Hay, A. Deshraj, J. Roomi, K. Ray Chaudhuri (London, United Kingdom)

602 **Types of driving errors committed by patients with Parkinson's disease**
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603 **Metabolomic analysis in LRRK2 Parkinson's disease**
K.K. Johansen, W. Matson, F. Beal, J.O. Aasly, M. Bogdanov (Trondheim, Norway)

604 **Effect of L-type Ca2+ channel antagonist, Isradipine, in the abnormal involuntary movement rat model of dyskinesia**
S. Schuster, A. Berthet, E. Doudnikoff, C. Ittrich, B. Bloch, B. Hengerer, E. Bezard (Biberach, Germany)

605 **Chocolate consumption is increased in Parkinson's disease**
M. Wolz, A. Kaminski, L. Matthias, S. Alexander, H. Reichmann (Dresden, Germany)

606 **Nonmotor symptoms of Parkinson's disease: Prevalence and awareness of patients and families**
S.-M. Cheon, H.M. Jeong, S.M. Jun, J.W. Kim (Busan, Republic of Korea)

607 **Impact of young onset parkinson's disease on employment**
C.L. Wielinski, C. Erickson-Davis, S.A. Parashos (Golden Valley, Minnesota, USA)

608 **Striatal dopamine transporter function and apathy in Parkinson's disease**
Z. Katsarou, S. Bostantjopoulou, G. Gerasimou, G. Kourtesi, V. Tsipropoulou, A. Kafantari, E. Peitsidou (Thessaloniki, Greece)

609 **Dementia and hyperhomocysteinemia in Parkinson's disease**
M. Menendez, R. Ribacoba, G. Jimenez, J.R. Virgili, C. Huerta, V. De la Vega (Mieres, Asturias, Spain)

610 **Does gait analysis quantify the efficacy of PPN-DBS in Parkinson's disease patients?**
A. Peppe, A. Stefani, P. Mazzone, A. Gasbarra, M. Pierantozzi, D. Crovato, C. Caltagirone, P. Stanzione (Rome, Italy)

611 **The effectiveness of cabergoline vs levodopa in early Parkinson's disease: Results of a three year follow up**
N.S. Oztekin, M.F. Oztekin (Ankara, Turkey)

612 **Neuropsychological assessment of mild to moderate stage Parkinson's disease without dementia: Comparison with mild stage of Alzheimer's disease (AD) – a preliminary study**
Y.D. Kim, J.E. Kim, J.H. Kim (Daejeon, Republic of Korea)

613 **Evolution of patients with Parkinson's disease chronically treated with continuous subcutaneous apomorphine infusion. A multicenter study**
P.J. Garcia Ruiz, M. Alvarez, J.A. Burguera, M. Calopa, M. Carballo, A. Castro, J.R. Chacon, J. Hernandez Vara, E. Lezcano, F. Miquel, P. Mir, J. Obeso, M.C. Rodriguez Oroz, A. Sesar, J. Vaamonde, J.M. Arbelo (Madrid, Spain)

614 **Anti-apoptotic mechanisms by D2/D3 receptor agonist ropinirole against rotenone-induced cell death in dopaminergic cell line**
S. Chen, X.-J. Zhang, W. Le (Shanghai, China)

615 **Influence of red and green laser lights on freezing of gait (FOG) in persons with Parkinson's disease (PD)**
M. Suteerawattananon, D.H. Rintala, E.C. Lai, J.-G.G. Hou, E.J. Protas (Houston, Texas, USA)

616 **Vascular parkinsonism: A case of lacunar infarction localized to mesencephalic substantia nigra**
A. Akyol, U.O. Akyildiz (Aydin, Turkey)

617 **The contribution of Jules Froment to the study of parkinsonian rigidity**
E. Broussolle, P. Krack, S. Thobois, J. Xie-Brustolin, P. Pollak, C.G. Goetz (Lyon, France)

618 **Steady state administration of istradefylline does not affect the pharmacokinetics of levodopa/carbidopa**
N. Rao, K. Allenby, T. Uchimura, A. Mori, P. Chaikin (Princeton, New Jersey, USA)

619 **Accuracy of patient versus spousal reports of disability in Parkinson's disease**
H. Tanji, A.L. Gruber-Baldini, K.E. Anderson, S.G. Reich, P.S. Fishman, W.J. Weiner, L.M. Shulman (Baltimore, Maryland, USA)

620 **A comparison of MMSE to MoCA in identifying cognitive deficits in Parkinson's disease**
C. Zadikoff, S.H. Fox, D.F. Tang-Wai, T. Thomsen, R.M.A. De Bie, S. Duff-Canning, P. Wadia, T. Steeves, A.E. Lang, C. Marras (Toronto, Ontario, Canada)

621 **No sleep-dependent consolidation of an implicit learning task in patients with Parkinson's disease**
S. Wailke, M. Fehlau, G. Deuschl, J. Volkmann (Kiel, Germany)

622 **The short- and long-term effects of a single dose of apomorphine on micturition function in conscious and free moving rats**
T. Uchiyama, R. Sakakibara, Z. Liu, T. Yamamoto, T. Ito, T. Hattori (Chiba, Japan)

623 **Weight change in Parkinson's and Alzheimer's disease patients taking atypical antipsychotic drugs**
O. Sitburana, S. Rountree, K. Dat Vuong, W.G. Ondo (Houston, Texas, USA)

624 **Molecular screening of the LRRK2 and parkin genes in a large cohort of Russian patients with Parkinson's disease**
S.N. Illarioshkin, S.A. Klyushnikov, P.A. Slominsky, M.I. Shadrina, G.K. Bagyeva, E.V. Bespalova, T.B. Zagorovskaya, E.D. Markova, S.A. Limborska, I.A. Ivanova-Smolenskaya (Moscow, Russian Federation)

625 **The SCOPA motor scale in Latin-America: Metric properties**
M.J. Forjaz, F.J. Carod, J. Virues, G. Galeano, G. Meza-Rojaz, C. Velazquez, F. Micheli, G. Reina, M. Serrano-Duenas, B. Calero, P. Martinez-Martin (Madrid, Spain)

626 **Medication review in patients on anti-parkinson medication in the community**
E.J. Newman, K. Grosset, E. Thomson, M. Liddle, D. Grosset (Glasgow, United Kingdom)

627 **Transcranial sonography (TCS) of the substantia nigra (SN) – biological and clinical significance in patients with Parkinsonian syndromes (PS)**
D. Weise, R. Lorenz, M. Schliesser, K. Reiners, J. Classen (Wuerzburg, Germany)

628 **Impaired information processing as a key determinant of akinesia in Parkinson's disease**
B. Christe, C.-A. Hauert, A.J. Pegna, P.R. Burkhard (Geneva, Switzerland)

629 **Efficiency of physiotherapy in Parkinson's disease: The ParkNet trial**
M. Munneke, M.J. Nijkrake, S.H.J. Keus, I.I.K. Lim, G.F. Borm, G.J. van der Wilt, R.A.C. Roos, G. Kwakkel, H.W. Berendse, B.R. Bloem (Nijmegen, Netherlands)

630 **Frequency and phenomenology of motor and non-motor features of wearing-off phenomenon in Brazilian Parkinson's disease patients**
F. Cardoso, B.P. Cesar, A.L. Teixeira, Jr, S.T. Camargos, D.P. Maia, M.C. Cunningham (Belo Horizonte, MG, Brazil)

631 **Postural instability in persons with Parkinson's disease: Comparison among disability scales of the Hoehn and Yahr**
M. Suteerawattananon, S. Kamolsawat, V. Hiengkaew, C. Akamanon, N. Poungvarin (Houston, Texas, USA)

632 **Biopsychosocial needs of people living with PD and their caregivers**
S. Giles, L. Johnston, C. Marras (Toronto, Ontario, Canada)

633 **Socio-demographic characteristics of the caregivers of patients with Parkinson's disease**
P. Martinez-Martin, S. Arroyo, B. Frades, J. de Pedro, The ELEP Group (Madrid, Spain)

634 **Handwriting in Parkinson's disease: The effects of disease severity and acute levodopa dosing**
M. Contin, P. Martinelli, R. Shrairman, C. Scaglione, A. Landau, F. Albani, R. Riva, A. Baruzzi (Bologna, Italy)

635 **Continuous and low-dose infusion of erythropoietin into the brain shows neuroprotective effect and induces neurogenesis without hematogenesis in the parkinsonian rat model**
A. Kondo, T. Shingo, T. Kadota, T. Yasuhara, Y. Miyoshi, T. Matsui, I. Date (Okayama, Japan)

636 **Correlation between depressive symptoms and nocturnal disturbances in Japanese patients with Parkinson's disease**
K. Suzuki, Y. Okuma, N. Hattori, S. Kamei, F. Yoshii, H. Utsumi, Y. Iwasaki, M. Iijima, T. Miyamoto, M. Miyamoto, K. Hirata (Mibu, Tochigi, Japan)

637 **A simple model of dopamine-related neurotoxicity — Parkinson's?**
L.R. Baxter, H.H. Fernandez, M.S. Okun, S. Janssen, K. Williams, S. Constance, J. Riley, Y. Liang, M. Boules, E. Richelson (Gainesville, Florida, USA)

638 **Abstract Withdrawn**

639 **Rotigotine transdermal patch as a treatment of nocturnal symptoms in patients with idiopathic Parkinson's disease**
K.R. Chaudhuri, J. Jankovic, C. Trenkwalder, B. Boroojerdi (London, United Kingdom)

640 **Plasma ceruloplasmin ferroxidase activity correlates with substantia nigra sonographic area in Parkinson's disease patients**
R. Martinez-Hernandez, S. Montes, J. Higuera-Calleja, C. Rios (Mexico City, DF, Mexico)

641 **Effects of subthalamic nucleus stimulation and levodopa on freezing of gait in Parkinson's disease**
M. Ferraye, B. Debu, V. Fraix, J. Xie-Brustolin, S. Chabardes, A.-L. Benabid, P. Pollak (Grenoble, France)

642 **Tremor related neuronal activity correlated with segregated somatotopy in the human subthalamic nucleus**
P. Zhuang, M. Hallett, J. Li, Y. Zhang, Y. Li (Beijing, China)

643 **Taste threshold is abnormal in Parkinson's disease and suggests cortical spread**
M. Shah, J. Deeb, M. Fernando, E. Visentin, A. Noyce, L.J. Findley, C.H. Hawkes (Romford, Essex, United Kingdom)

644 **Levodopa, DDCI and entacapone has minor long-term effects on dyskinesia while significantly decreasing OFF-time in Parkinson's disease (PD) patients with wearing off**
M. Kuoppamäki, M. Vahteristo, H. Nissinen, J. Ellmen (Turku, Finland)

645 **Patient-reported autonomic symptoms in Parkinson's disease**
D. Verbaan, J. Marinus, M. Visser, S.M. van Rooden, A.M. Stiggelbout, J.J. van Hilten (Leiden, Netherlands)

646 **SOS Parkinson: An emergency call service report on five years of experience**
A.L. Zecchinelli, A. Antonini, M. Barichella, A. Marczewska, G. Pezzoli (Milano, Italy)

647 **Glucose-6-Phosphate dehydrogenase in the peripheral blood of patients with Parkinson's disease**
P. Mir, L. Gao, F. Diaz, R. Mejias, F. Carrillo, P.J. Vime, J. Diaz-Martin, A. Palomino, M. Carballo, E. Pintado, M. Lucas, J. Lopez-Barneo (Seville, Spain)

648 Establishing a model of "Standards of Care" for patients with Parkinson's disease using a comprehensive database — Interdisciplinary Florida Registry and Movement Disorders Database (INFORM)
R.L. Rodriguez, C. Jacobson, C. Garvan, R. Stephen, K.D. Foote, C. Nugent, J. Romrell, P. Zeilman, M.S. Okun, S. Vaidyanathan, H.H. Fernandez (Gainesville, Florida, USA)

649 Inter-individual variations of plasma concentrations of amantadine hydrochloride in patients with Parkinson's disease
M. Nagai, M. Kubo, N. Nishikawa, H. Yabe, M. Nomoto (Toon, Ehime, Japan)

650 Environmental and genetic factors in Parkinson's disease. The FRAGAMPP case-control study
A. Nicoletti, P. Pugliese, G. Nicoletti, G. Arabia, G. Torchia, M. De Mari, P. Lamberti, L. Grasso, R. Marconi, A. Epifanio, L. Morgante, L. Cozzolino, P. Barone, A. Quattrone, M. Zappia (Catania, Italy)

651 Investigation on the prevalence of dyskinesia following the switch from continuous rotigotine to L-DOPA treatment and vice versa
K. Stockwell, D.K.A. Scheller, S. Rose, M. Jackson, P. Jenner (Monheim, Germany)

652 Proteome analysis of human substantia nigra in Parkinson's disease
C.J. Werner, R. Heyny-von Haussen, G. Mall, S. Wolf (Aachen, NRW, Germany)

653 Elevated C-reactive protein in Parkinson's disease: Are they associated with neuropsychiatric complications?
S. Hassin-Baer, O.S. Cohen, B.-A. Sela, Z. Nitzan, E. Vakil, R. Schwartz, J. Chapman, T. David (Ramat-Gan, Israel)

654 Brain permeable iron chelators M-30 and AK-28 rescue degenerated nigral dopamine neurons in animal model of PD
W. Zhu, T. Pan, W. Xie, J. Jankovic, H. Zheng, M. Youdim, W. Le (Houston, Texas, USA)

655 Dynamic foot pressure measurement in Parkinson's disease with foot scan system
C.-N. Lee, D.-H. Lee, K.-W. Park, B.-J. Kim, K.-M. Oh (Seoul, Korea)

656 Risk factors for heavy burden among family caregivers of Parkinson's disease patient
O. Benavides, P. Chana, D. Alburquerque, T. Parrao, C. Juri, C. Kunstmann (Santiago, Chile)

657 What is dorso-lateral in the STN? An anatomical consideration on the ambiguous nomenclature of today's principle target for DBS surgery
V.A. Coenen, A. Prescher, T. Schmidt, F.I.H. Gielen (Aachen, Germany)

658 Discharge properties of human subthalamic nucleus neurons in the parkinsonian and non-parkinsonian state
F. Steigerwald, P. Stangenberg, M. Pötter, J. Herzog, M. Pinsker, H.M. Mehdorn, G. Deuschl, J. Volkmann (Kiel, Germany)

659 Rotigotine transdermal patch in early stage Parkinson's disease: Results of a placebo- and ropinirole-controlled trial
N. Giladi, A. Korczyn, B. Boroojerdi (Monheim, Germany)

660 Two novel missense mutations were found in a Parkin2 gene and may be related to the development of the early onset parkinsonism
M. Kasap, G. Akpinar, E. Ergul, H.A. Idrisoglu, A. Sazci (Kocaeli, Turkey)

661 Impaired attention: A risk factor for falls in Parkinson's disease?
L.M. Allcock, E.N. Rowan, K. Wesnes, R.A. Kenny, D.J. Burn (Newcastle upon Tyne, Tyne and Wear, United Kingdom)

662 Age-dependent changes in glial cells from parkin null mice
R.M. Solano, M.J. Casarejos, J. Menéndez-Cuervo, J.A. Rodríguez-Navarro, J. García de Yébenes, M.A. Mena (Madrid, Spain)

Poster Session 3

Thursday, June 7, 2007 - 12:30 PM - 2:30 PM
Rumeli Hall, Lower Level
Poster Viewing 9:00 a.m. to 4:00 p.m.
Authors Present 12:30 p.m. to 2: 30 p.m.
Poster numbers 663-973

Other Clinical

Poster numbers 663-708

663 **High-level gait disturbance is a manifestation of the pyramidal, cortico-pontine and thalamic-demyelination in elderly people. MRI pilot study**
Y. Balash, M. Kafri, E. Sasson, O. Eizenstein, Y. Assaf, J.M. Hausdorff, N. Giladi (Tel Aviv, Israel)

664 **Substantia nigra and olfactory function in idiopathic REM sleep behaviour disorder: A pilot study**
V. Gschliesser, H. Stockner, B. Hogl, B. Frauscher, C. Schmidauer, W. Poewe (Innsbruck, Austria)

665 **Ipsilateral upper limb asterixis and contralateral parkinsonism related to putaminal hemorrhage**
M.J. Kim, J.K. Kim, B.G. Yoo, K.S. Kim (Busan, Korea)

666 **Botulinum toxin treatment is effective for epilepsia partialis continua**
J.-S. Kang, K. Krakow, H. Steinmetz, R. Hilker (Frankfurt/Main, Germany)

667 **Appearance of Kleine-Levin Syndrome (KLS) after acute infection**
K. Dimitrios, K. Konstantinos, B. Aggeliki (Athens, Greece)

668 **A system for syncronized recording and automatic processing of video- and biodata files in movement disorder evaluation**
E. Nordh, M. Larsson, M. Johansson (Umea, Sweden)

669 **High Prevalence of tremor, parkinsonism and neuropsychological impairment induced by mercury in handmade miners. Andacollo, IV region, Chile**
F. Pancetti, G. Lam, P. Lillo, D. Saez, D. Moraga, S. Corral (Coquimbo, Chile)

670 **An acquired neuromyotonia case non-associated to thymoma with significant clinical improvement after thymectomy**
M.A. Sierra-Beltrán, U. Rodríguez-Ortiz, J.A. Nader-Kawachi, M.S. Rodrìguez (Mexico City, DF, Mexico)

671 **Movement Disorders at university hospital emergency room; an analysis of clinical pattern and etiology**
P.H. Lee, J.H. Yoon, H.Y. Park, T.S. Lim, J.Y. Choi (Suwon, Gyeonggi, Republic of Korea)

672 **Mirror movements in different neurological diseases**
S. Sahin, S. Ayalp, S. Karsidag (Istanbul, Turkey)

673 **3 cases of bilateral striatopallidodental calcinosis**
E. Lobsien, A. Bick-Sander, S. Eibach, K.-T. Hoffmann, T. Trottenberg, A. Kupsch (Berlin, Germany)

674 **Posterior alien limb phenomenon as presenting symptom of bacterial endocarditis**
A. Glik, R. Inzelberg (Kfar Saba, Israel)

675 **Methylphenidate improves cognition and reduces fall risk in older adults with cognitive decline: Single dose, placebo controlled, double-blind study**
R. Ben-Itzhak, J.M. Hausdorff, E.S. Simon, N. Giladi (Tel-Aviv, Israel)

676 **Two cases of primary progressive freezing gait with different chronologic progression and different imaging**
M. Kim, E. Son, S. Choi, K. Lee, S. Lee, M. Park, K. Cho (Gwangju, Korea)

677 **The Dynamic Gait Index provides insight into stair climbing and fear of falling in healthy elderly men and women**
T. Herman, M. Brozgol, N. Ibar-Borovsky, N. Giladi, G. Yogev, L. Grundlinger, J.M. Hausdorff (Tel Aviv, Israel)

678 **Associated conditions and clinical significance of awake bruxism**
Y.T. Kwak, S.-H. Suk, W.-J. Kim (Yongin-shi, Kyeongki-do, Republic of Korea)

679 **Nordic walking improves mobility in Parkinson's disease**
F. Vereijkeren, R. Reijmers, A. Minten, J.P. ter Bruggen ('sHertogenbosch, NB, Netherlands)

680 **A progressive, fatal dystonia-parkinsonism syndrome in a patient with primary immunodeficiency receiving chronic IVIG therapy**
S. Papapetropoulos, J. Friedman, C. Blackstone, G.I. Kleiner, C. Sengun, C. Singer (Miami, Florida, USA)

681 **New assessment concerning movement signs/ symptoms in atypical movements diseases consulted in units-setting. Treatment rationalizing**
S.G. Echebarria (Spain)

682 **EEG comparison in early AD, LBD, PDD patients with a 2-year follow-up**
L. Bonanni, A. Thomas, L. Manzoli, M. Onofrj (Pescara, Italy)

683 **Atypical PKAN, a broadening clinical spectrum: Case report and video**
N. Lubarr, S. Frucht, S.K. Westaway, A. Gregory, S.J. Hayflick (New York, New York, USA)

684 **Normal interhemispheric inhibition in persistent developmental stuttering**
M. Sommer, K. Knappmeyer, E.J. Hunter, A. Wolff von Gudenberg, W. Paulus (Goettingen, Germany)

685 **Patients with hyperhidrosis treated with botulinum toxin have changed grip force, coefficient of friction and safety margin**
T. Zackrisson, B. Eriksson, N. Hosseini, B. Johnels, A.L. Krogstad (Gothenburg, Sweden)

686 **Long-term follow-up of deep brain stimulation: Timing of generator replacement**
M. Takanashi (Sapporo, Hokkaido, Japan)

687 **The other babinski sign in hemifacial spasm**
W.P. Stamey, J. Jankovic (Houston, Texas, USA)

688 **Electroconvulsive therapy for depression in a patient with right-sided VIM DBS**
V.C. Chang, D. Hardesty, B. Ford, P. Greene (New York, New York, USA)

689 **Clinical and electrophysiological features of 12 patients with painful legs and moving toes**
M.V. Alvarez, V.G. Evidente, E.D. Driver-Dunckley, J.N. Caviness, C.H. Adler (Scottsdale, Arizona, USA)

690 **A study on the effects of botulinum toxin A, Botox® and Dysport®, in patients with hemifacial spasm**
N. Wan Yahya, N. Mohamad Ibrahim, R. Sahathevan, H. Basri, R. Azman Ali (Kuala Lumpur, Malaysia)

691 **New and associated motor signs in movement disorders units case sampling**
S.G. Echebarria (Spain)

692 **Prevalence of movement disorders in Orhangazi district of Bursa, Turkey (a population-based door to door study) (Bursa, Turkey)**
M. Zarifoglu, S. Erer, N. Karli, A. Ozcakir, A. Semra, N. Caliskan, D. Aslan (Bursa, Turkey)

693 **Miraxion treatment for Huntington's disease – a 2 year follow-up**
A. Clarke, B.R. Leavitt, M. Manku, A. Rosenblatt (Oxford, Oxfordshire, United Kingdom)

694 **A new test to measure upper limb apraxia (TULIAS): A reliability study**
B. Van Hemelrijk, T. Vanbellingen, A. Van de Winckel, W. De Weerdt, S. Bohlhalter (Tschugg, Switzerland)

695 **Clinical trial participation in Movement Disorders: Why do patients accept or reject?**
M.P. Silverstein, C.E. Jacobson IV, M.S. Okun, R.L. Rodriguez, H.H. Fernandez (Gainesville, Florida, USA)

696 **Analysis of survival in patients with Huntington's disease in Serbia**
I.N. Petrovic, M. Svetel, T. Pekmezovic, N. Dragasevic, V.S. Kostic (Belgrade, Serbia)

697 **Motor neuron disease associated with copper deficiency in a case of Wilson's disease**
A. Foubert, A. Kasadi, M. Rouanet, A. Lagueny, F. Tison (Pessac, France)

698 **Beneficial effect of Piracetam on obstructive sleep apnea syndrome in patients with multiple system atrophy**
Y. Nakamura, I. Yamada, H. Sakamoto (Sakai, Osaka, Japan)

699 **Electroconvulsive therapy for a patient with lethal catatonia-neuroleptic malignant syndrome**
V.C. Chang, D. Hardesty, M. Pietro (New York, New York, USA)

700 **A rare combination of Klippel-Feil syndrome and pheochromocytoma: Case report**
S. Telarovic, T. Bajica, S. Juren, M. Relja (Zagreb, Croatia)

701 **Safety and efficacy of Hengli® and Dysport® for primary hemifacial spasm: A randomized controlled trial**
Y.W. Wu, L.L. Zeng, S.D. Chen (Shanghai, China)

702 **Paroxysmal kinesogenic dyskinesia following ischemic insult**
S.R. Daniels, K. Nakamura, G.A. Kang (San Francisco, California, USA)

703 **Frontotemporal dementia due to VCP mutations: Clinical and functional neuroimaging findings**
D. Haubenberger, G. Pusswald, M. Hoffmann, A. Zimprich, E. Auff (Vienna, Austria)

704 **Wilson's disease: A study of 21 cases from Indian subcontinent**
B. Sharma, R.K. Sureka, A. Panagariya, N. Agarwal, V. Agarwal, A. Dev (Jaipur, Rajasthan, India)

705 **L-Dopa responsive movement disorder in a young patient with mixed connective tissue disease (sharp syndrome)**
S. Haegele-Link, A. Burrow, T. Hundsberger, B. Tettenborn (St. Gallen, Switzerland)

706 **Handtapping as a clinical marker for evaluating disease progression in Huntington's disease**
S.L. Mason, A.O.G. Goodman, A. Michell, R.A. Barker (Cambridge, Cambridgeshire, United Kingdom)

707 **The role of proportion of cerebrospinal fluid total tau-protein levels to phosphorylated tau-protein levels in differential diagnosis of Creutzfeltd-Jacob disease**
M. Valis, J. Hort, R. Talab (Hradec Kralove, Czech Republic)

708 **Alien hand syndrome and dystonia in a pediatric patient**
T. Soman, T. Steeves, A.E. Lang (Toronto, Ontario, Canada)

Parkinson's disease
Poster numbers 709-829

709 **Effects of subthalamic stimulation on brain electrical activity during a motor task in Parkinson's disease**
L. Colloca, F. Benedetti, M. Lanotte, M. Sigaudo, M. Zibetti, A. Cinquepalmi, S. Vighetti, A. Ducati, L. Lopiano (Turin, Italy)

710 **Salsolinol decreases expression of the antral but not duodenal and colonic interstitial cells of Cajal**
T.A. Banach, A.T. Krygowska-Wajs, K.M. Gil, D. Zurowski, P.J. Thor (Cracow, Poland)

711 **The differential diagnoses of Parkinsonism in outpatient clinics of PD Northumbria**
E. Stone, R. Walker, B. Wood (North Shields, United Kingdom)

712 **Continuous duodenal levodopa infusion (DUODOPA) in advanced Parkinson's disease: First French experience**
M. Hery, F. Lallement, P. Sauleau, S. Drapier, I. Rivier, M. Verin (Rennes, France)

713 **Good treatment compliance in patients with Parkinson's disease on ropinirole: The Ropi-Park study**
F. Valldeoriola, S. Cobaleda, Ropipark Study Research Group (Barcelona, Spain)

714 **Valvular heart disease in Parkinson's disease patients treated with bromocriptine**
L.C.S. Tan, K.K.C. Ng, N.C.K. Tan, W.L. Au, R.K.K. Lee (Singapore, Singapore)

715 **The diagnostic value of transcranial duplex scanning and SPECT imaging versus clinical diagnosis (clinical prospective study)**
S.C. Tromp, A.M.M. Vlaar, M.J.P.G. Kroonenburgh Van, W.H. Mess, T. de Nijs, A. Winogrodzka, A.G.H. Kessels, W.E.J. Weber (Maastricht, Netherlands)

716 **Roles of DJ-1, a causative gene product for familial Parkinson's disease, in dopamine biosynthesis**
S. Ishikawa, T. Taira, H. Maita, C. Maita, H. Ariga, S.M.M. Iguchi-Ariga (Sapporo, Japan)

717 **Level of movement, cognitive and emotional disturbances and their correlation in patients with Parkinson's disease**
D.R. Hristova, I.S. Grozdev (Plovdiv, Bulgaria)

718 **The QUICK questionnaire identifies wearing-off in Parkinson's disease patients**
P. Martinez-Martin, E. Tolosa, B. Hernandez, X. Badia (Madrid, Spain)

719 **Dopamine dysregulation syndrome in Parkinson's disease patients: Preliminary results of a clinical study**
A. Gunduz, F. Beskardes, S. Ertan, S. Ozekmekci, G. Kiziltan (Istanbul, Turkey)

720 **Pathological gambling in Parkinson's disease: An analysis of published case series**
D.A. Gallagher, S.S. O'Sullivan, A.H. Evans, A.J. Lees, A. Schrag (London, United Kingdom)

721 **Driver safety errors in Parkinson's disease**
E.Y. Uc, M. Rizzo, J. Sparks, S.W. Anderson, R.L. Rodnitzky, J.D. Dawson (Iowa City, Iowa, USA)

722 **Mitochondrial DNA polymorphisms and the risk of Parkinson's disease in Taiwan**
C.-M. Chen, C.-C. Kuan, G.-J. Lee-Chen, Y.-R. Wu (Taipei, Taiwan)

723 **Social impact on Parkinson's disease caregivers and the impact of disease duration**
J. Loekk (Stockholm, Sweden)

724 **Antibiotics and Parkinson's disease: Overview on literature and case reports**
K.S. Paulus, V. Agnetti, P. Galistu, G.A. Cocco, G. Sechi (Sassari, Sardegna, Italy)

725 **Reversible Retrocollis in a case of Parkinson's disease with hyponatremia induced malignant syndrome**
S. Chandran (Trivandrum, Kerala, India)

726 **Comparison of pharmacokinetics and pharmacodynamics of combined immediate- and extended-release (IR+ER)/carbidopa/levodopa formulations (VADOVA IR+ER) with IR carbidopa/levodopa and controlled-release (CR) carbidopa/levodopa in Parkinson's disease (PD)**
J. Nutt, P.A. LeWitt, A. Ellenbogen, S. Wang, T. Nguyen, S. Khor, A. Hsu (Portland, Oregon, USA)

727 **Rapid efficacy of a noradrenergic reuptake inhibitor in depression in advanced Parkinson's disease: A double-blind, randomized, placebo-controlled study**
D. Devos, I. Poirot, K. Dujardin, S. Duhem, B. Lucas, N. Waucquier, C. Moreau, P. Bocquillon, P. Devos, K. Ajebbar, B. Thielemans, O. Cottencin, P. Thomas, A. Destée, R. Bordet, L. Defebvre (Lille, France)

728 **Botulinum toxin treatment for anterocollis in Parkinson's disease**
H. Ito, Y. Takanashi (Akishima, Tokyo, Japan)

729 **Novel LRRK2 mutation in the Roc domain in an Western Australian family with autosomal dominant late-onset Parkinson's disease (LOPD)**
F.L. Mastaglia, Y. Huang, G.M. Halliday, D.B. Rowe, C.M. Sue (Nedlands, WA, Australia)

730 **Psychiatric features of caregivers of Parkinson's disease patients with dopamine dysregulation syndrome: Preliminary results of a clinical study**
F. Beskardes, A. Gunduz, G. Kiziltan, S. Ertan, S. Ozekmekci (Istanbul, Turkey)

731 **Can dual-forceplate posturography support the diagnosis Parkinson's disease?**
A.C. Geurts, N. Voermans, M.G. Diender, V. Weerdesteyn, B.R. Bloem (Nijmegen, Netherlands)

732 **Quality of life improvement in Parkinson's patients after DBS: Identifying the super-responders**
I.U. Haq, M.S. Okun, R. Rodriguez, K. Foote, C. Jacobson, C. Garvan, H. Fernandez (Gainesville, Florida, USA)

733 **Increased Synphilin-1 expression in elderly and parkinsonian brains**
A.T. Krygowska-Wajs, T. Lenda, K.I. Ossowska, D. Adamek, E.A. Gryz-Kurek, J. Kunz (Cracow, Poland)

734 **Exercise-induced alterations in striatal glutamate in an animal model of Parkinson's disease**
C.K. Meshul, J.K. Wiedemann, C. Moore, R.J. Koch, R.H. Walker (Bronx, New York, USA)

735 **A computerized survey of pain in Parkinson's disease patients: A pilot feasibility study**
D.B. Page, F. Weaver, D.J. Wilkie, T. Simuni (Chicago, Illinois, USA)

736 **Clinical correlates of camptocormia in Parkinson's disease**
D. Ottaviani, D. Tiple, C. Colosimo, G. Fabbrini, G. Defazio, A. Berardelli (Rome, Italy)

737 **Reaching out to first degree relatives**
J. Posen, Z. Heiblum, N. Giladi (Tel Aviv, Israel)

738 **Prevelance of dyskinesia switching from pulsatile to continuous rotigotine administration in MPTP-treated marmosets**
K. Stockwell, D.K.A. Scheller, S. Rose, M. Jackson, P. Jenner (Monheim, Germany)

739 **The effectiveness of pramipexole, cabergoline and pergolide in early and advanced Parkinson's disease and comparision of the results with each other**
O. Yilmaz, B. Yucel-Altan, S. Oruc, S. Gok, N.S. Oztekin (Afyonkarahisar, Turkey)

740 **Striatal dopamine transporter imaging correlates with depressive symptoms and Tower of London task performance in Parkinson's disease**
I. Rektorova, H. Srovnalova, R. Kubikova, J. Prasek (Brno, Czech Republic)

741 **Nociceptin/orphanin FQ receptor antagonists reverse parkinsonism in MPTP-treated mice and non-human primates**
M. Morari, R. Viaro, M. Marti, R. Sanchez-Pernaute, O. Isacson (Ferrara, Italy)

742 **Clinical characteristics of Parkinson's disease among Jewish ethnic groups in Israel**
R. Djaldetti, S. Hassin-Baer, M.J. Farrer, T.A. Treves, Y. Barhum, M.M. Hulihan, S. Yust-Katz, E. Melamed (Petah Tiqva, Israel)

743 **Falls in Parkinson's disease: Analysis of the DoPaMiP study, a cross-sectional survey in South-West of France**
O.O. Rascol, L.L. Negre-Pages, DoPaMiP D. Study Group (Toulouse, France)

744 **L-Dopa induced dyskinesia in Parkinson's disease: Analysis of the DoPaMiP study, a cross-sectional survey in South-West of France**
L.L. Negre-Pages, O.O. Rascol, DOPAMIP D. Study Group (Toulouse, France)

745 **The natural history of treated Parkinson's disease**
J.J. Duarte, L.M. García Olmos, L.E. Clavería (Segovia, Spain)

746 **Full-length expression of Park2 gene in human leukocytes**
M. Kasap, G. Akpinar, E. Ergul, H.A. Idrisoglu, A. Sazci (Kocaeli, Turkey)

747 **Results of the PRAMI study: Description of the therapeutic management of patients with idiopathic Parkinson's disease (PD)**
M. Dujardin, P.L. Lleu (Paris, France, Metropolitan)

748 **Chronic Captopril treatment accelerates injury in an early stage rat model of Parkinson's disease**
E. Thornton, R. Vink (Adelaide, SA, Australia)

749 **Prevalence of non-motor symptoms in Parkinson's disease patients**
L. Vela, K.F. Lyons, J.A. Pareja, J.L. Dobato, F.J. Barriga, C. Sanchez, M. Baron, A.P. Polo, L. Borrega (Alcorcon, Madrid, Spain)

750 **Identifying predictors of somnolence and edema in patients with early Parkinson's disease treated with pramipexole: A secondary analysis of the CALM-PD study**
K.M. Biglan, A. Brocht, M.P. McDermott, K. Kieburtz, Parkinson Study Group CALM-PD Investigators (Rochester, New York, USA)

751 **Non-motor dysfunction contributes to swallowing dysfunction in PD and could be a target for future therapy**
N. Sengupta, H.N. Jones, J.C. Rosenbek, M.S. Okun, R.L. Rodriguez, F.M. Skidmore, C. Swartz, H.H. Fernandez (Gainesville, Florida, USA)

752 **The impact of the use of Access Therapy Controller on the postoperative outcome**
N. Kovacs, I. Balas, L. Kellenyi, E. Pal, F. Nagy (Pecs, Hungary)

753 **Identifying predictors of response to pramipexole treatment in early Parkinson's disease: A secondary analysis of the CALM-PD study**
K.M. Biglan, A. Brocht, M.P. McDermott, K. Kieburtz, Parkinson Study Group CALM-PD Investigators (Rochester, New York, USA)

754 **Prevalence and characteristics of punding among Parkinson patients in North-Central Florida**
F.N. Nguyen, Y.-L. Chang, M.A. Shapiro, C.E. Jacobson, C.L. Swartz, M.S. Okun, H.H. Fernandez (Gainesville, Florida, USA)

755 **The scores of UPDRS correlate with objectively measured motor performance characteristics in Parkinson's disease**
K. Noorvee, D. Uueni, M. Paasuke, P. Taba (Tartu, Estonia)

756 **Task-specific limb dystonia with slow onset: Initial symptom of Parkinson's disease or association of two diseases?**
I. Nestrasil, P. Kanovsky (Olomouc, Czech Republic)

757 **Retention rate and tolerability of rotigotine** transdermal skin patch for a "real life" population of Parkinson's disease patients in the UK
P. Reddy, S. Muzerengi, A. Forbes, R. Weeks, K. Ray Chaudhuri (London, United Kingdom)

758 **Comparison of proton-MR-spectroscopy of the substantia nigra in patients with Parkinson's disease, relatives and controls**
A. Di Santo, U. Klose, K. Schweitzer, J. Godau, D. Berg (Tuebingen, Baden-Wurttembe, Germany)

759 **Additional value of SPECT imaging in comparison with clinical diagnosis in 248 patients with parkinsonism**
A.M.M. Vlaar, M.J.P.G. Kroonenburgh Van, T. Nijs De, W.H. Mess, S.C. Tromp, A. Winogrodzka, W.E.J. Weber (Maastricht, Netherlands)

760 **Anti-psychotic treatment discontinuation and drug-induced psychosis in Parkinson's disease**
F. Morgante, A. Epifanio, M. Zappia, R. Marconi, G. Paolo, A. Quartarone, A. Quattrone, L. Morgante (Messina, Italy)

761 **PD patients with STN-DNS gain weight in relation to motor improvement: A prospective study**
A. Foubert, E. Krim, C. Perlemoine, P. Burbaud, E. Cuny, S. Maurice-Tison, V. Rigalleau, F. Tison (Pessac, France)

762 **Towards adaptive deep brain stimulation: Recording local field potentials during stimulation**
L. Rossi, G. Foffani, S. Marceglia, A. Priori (Milan, Italy)

763 **A comparison of cerebral glucose metabolism in Parkinson's disease, Parkinson's disease dementia, and dementia with Lewy bodies**
S.W. Yong, P.H. Lee, Y.J. Kim (Suwon, Kyunggi-do, Korea)

764 **Extraction of typical features from surface EMG signals in Parkinson's disease**
S.M. Rissanen, M. Kankaanpää, M.P. Tarvainen, J. Nuutinen, I.M. Tarkka, A. Meigal, O. Airaksinen, P.A. Karjalainen (Kuopio, Finland)

765 **Low dose methylphenidate improves freezing in advanced Parkinson's disease during off-state**
L. Pollak, E. Dobronevsky, T. Prokhorov, S. Bahunker, J.M. Rabey (Zerifin, Israel)

766 **Cerebrovascular risk factors and procedural learning in idiopathic Parkinson's disease**
E. Pourcher, H. Cohen (Quebec, Quebec, Canada)

767 **Starting therapy in Parkinson's disease with L-dopa or agonists and the occurrence of late L-dopa motor problems in daily practice**
M.W.I.M. Horstink, C.A. Haaxma, G.F. Borm, B.R. Bloem (Nijmegen, Netherlands)

768 **Correlation between postural changes and cognitive impairment in Parkinson's disease**
G. Marco, P. Lucia, P. Susy, F. Sandro, S. Maura (Ancona, Italy)

769 **Parkinson's disease, malignant melanoma and body mass index**
E.C. Lai, S. Moore (Houston, Texas, USA)

770 **Cognitive effects of safinamide in early Parkinson's disease (PD) patients**
T. Sharma, R. Anand, F. Stocchi, R. Borgohain, S. Rossetti, 015 Study Group (Newark, Delaware, USA)

771 **The effectiveness of pramipexole and levodopa as an initial treatment for Parkinson's disease**
N.S. Öztekin, M.F. Öztekin, R.S. Polat, B. Renkliyildiz (Ankara, Turkey)

772 **The data base of "Quality Development in Neurology and Psychiatry (QUANUP)"-group – results of the Parkinson's disease pilot project**
M. Muengersdorf, P. Scherer, A. Simonow, P. Reuther, R. Ehret (Berlin, Germany)

773 **Levetiracetam administration for the management of levodopa-induced dyskinesias in Parkinson's disease: An ongoing, multicenter, double-blind, placebo-controlled, parallel, crossover trial (the VALID-PD study) study design and baseline patient characteristics**
P. Stathis, S. Konitsiotis, G. Tagaris, V. Kyriakakis, G. Hadjigeorgiou, The VALID-PD Study Group (Athens, Greece)

774 **Factors that influenced in quality of life in parkinsonian patient according SF-36 (short form – 36)**
A. Machin, M. Hamdan, Y. Saelan (Surabaya, East Java, Indonesia)

775 **Freezing of gait severity and executive dysfunction in patients with Parkinson's disease**
M. Amboni, A. Cozzolino, K. Longo, M. Picillo, P. Barone (Naples, Italy)

776 **Comparative scintigraphic analysis of the parotid glands in healthy volunteers and in patients with sialorrhea and Parkinson's disease (PD)**
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777 **Dementia and depression in Parkinson's disease**
A. Akyol, A. Ozkul, E. Turgut, E. Yilmaz, U. Akyildiz, S. Memis (Aydin, Turkey)

778 **Clinical characteristics and prevalence of Parkinson's disease in orhangazi district of Bursa, Turkey (a population-based door to door study) (Bursa, Turkey)**
M. Zarifoglu, S. Erer, N. Karli, M. Boz, A. Bican (Bursa, Turkey)

779 **Midbrain iron measured with MRI in early Parkinson's disease**
W. Martin, M. Wieler, M. Gee (Edmonton, Alberta, Canada)

780 **COMT val158met genotype influences attentional control in Parkinson's disease**
C.H. Williams-Gray, A. Hampshire, A.M. Owen, R.A. Barker (Cambridge, United Kingdom)

781 **Long-term efficacy and safety of zonisamide in advanced Parkinson's disease**
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782 **An overview of specialist multidisciplinary services for Parkinson's disease patients at Llandough Day Hospital**
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783 **Neuropsychological effects of bilateral STN DBS in advanced Parkinson's disease**
R. Borgohain, R. Reddy, M.K. Panigrahi, S. Shanmukhi, T. Suryaprabha, A. Jabeen (Hyderabad, Andhra Pradesh, India)

784 **Postural verticality problems in parkinson patients**
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785 **Pathological gambling in Parkinson's disease**
M. Yamamoto, Y. Kageyama (Takamatsu, Japan)

786 **Dopamine dysregulation syndrome is similarly common among Parkinson's disease patients treated with rotigotine transdermal patch as with ropinirole**
N. Giladi, H. Shabtai, A. Levi, T. Gurevich, Y. Balash, I. Girshovich, C. Peretz (Tel Aviv, Israel)

787 **Myocardial [(123)I] metaiodobenzylguanidine is preserved uptake in hereditary Parkinson's disease with LRRK2 I2020T mutation (HPD Sagamihara family)**
Y. Ogino, M. Ogino, S. Ujiie, F. Sakai (Sagamihara, Kanagawa, Japan)

788 **Nighttime sleep problems and daytime sleepiness in Parkinson's disease**
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789 **Comparison of sympathetic skin response and urodynamic study in Parkinson's disease**
M. Tavsan, O. Mertoglu, U. Sener, Y. Zorlu, F. Zorlu (Izmir, Turkey)

790 **Influence of intestinal levodopa on non-motor symptoms of Parkinson's disease – a case report**
M. Koegl-Wallner, R. Saurugg, P. Schwingenschuh, P. Katschnig, K. Wenzel, M. Maric, T. Hinterleitner, E. Ott (Graz, Styria, Austria)

791 **Use of Parkinson's disease sleep scale (PDSS) and polysomnography in "sleepy" Parkinson's disease (PD) patients**
S. Muzerengi, A. Williams, V. Dhawan, D. Whitehead, P. Martinez-Martin, K. Ray Chaudhuri (London, United Kingdom)

792 **Results of the PRAMI study: Prevalence of neuropsychiatric symptoms in patients with idiopathic Parkinson's disease (PD)**
M. Dujardin, P.L. Lleu (Paris, France)

793 **Community based prevalence study of Parkinson's disease describing age at onset distribution in Cardiff, UK**
M.M. Wickremaratchi, E. Morgan, C. O'Loghlen, D. Sastry, N.P. Robertson, Y. Ben-Shlomo, H.R. Morris (Cardiff, United Kingdom)

794 **Placebo influences on dyskinesia in Parkinson's disease**
C.G. Goetz, E. Laska, C. Hicking, P. Damier, T. Müller, J. Nutt, C.W. Olanow, O.O. Rascol, H. Russ (Chicago, Illinois, USA)

795 **New formulation of carbidopa/levodopa (IPX054 (VADOVA IR+ER) vs. standard carbidopa/levodopa in stable PD patients**
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796 **Tolcapone (TASMAR®) in the treatment of advanced Parkinson's disease: Results of a postmarketing surveillance study**
G. Ebersbach (Paracelsusring, Germany)

797 **Safinamide potentiates the effects of DA-agonists in early stage Parkinson's disease (PD) patients**
R. Anand, M. Onofrj, A.H. Schapira, S.M. Rossetti (Pescara, Italy)

798 **Automated gait detection algorithm from three dimensional acceleration signals of ankles in patients with Parkinson's disease**
J.-Y. Kim, J.-Y. Lee, K.S. Park, B.S. Jeon (Seoul, Jongno-Gu, Korea)

799 **Dementia in Parkinson's disease (PD): A 20-year prospective Sydney Multicentre study**
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800 **Treatment of levodopa induced dyskinesias with Levetiracetam**
D. Richardson, M. Eisa, A. Toenjes, R. Bajwa, D. Miller, B. Jabbari (New Haven, Connecticut, USA)

801 **Anxiety, depression and swallowing disorders in patients with Parkinson's disease**
Y. Manor, B. Meirav, N. Giladi, R. Mootanah, J.T. Cohen (Tel-Aviv, Israel)

802 **Healthcare educational needs and experiences of people living with Parkinson's disease (PD): An exploratory study**
S. Giles, J.M. Miyasaki (Toronto, Ontario, Canada)

803 **Unilateral haemorrhage in Gpe (globus pallidum externum) improving the Parkinsonian and psychotic symptomatology. A case report**
M. Baláž, I. Rektorová, I. Rektor (Brno, Czech Republic)

804 **Increased periodontal disease and tooth loss in Parkinson's disease**
A. Hanaoka, K. Kashihara (Okayama, Japan)

805 **Punding in Parkinson's disease**
A. Bora Tokcaer, O. Kapucu, N. Erdogmus Ince, U.O. Akdemir (Ankara, Turkey)

806 **Long-term pre-administration of dopamine agonists alters L-dopa induced circling behavior in the 6-OHDA lesioned rat**
E.L. Lane, S.B. Dunnett (Cardiff, Wales, United Kingdom)

807 **Increased resting-state functional connectivity in de novo, untreated Parkinson's disease**
D. Stoffers, J.L.W. Bosboom, J.-B. Deijen, E.C. Wolters, C.J. Stam, H.W. Berendse (Amsterdam, Noord-Holland, Netherlands)

808 **Interleukin-10 gene transfection of C17.2 cells improves behavior in rat model of Parkinson's disease through inhibition of microglia activation**
X.-J. Wang*, W.-G. Liu*, Y.-H. Zhang, G.-Q. Lu, S.-D. Chen (China)

809 **Shoulder pain in Parkinson's disease**
W.P. Stamey, J. Jankovic (Houston, Texas, USA)

810 **Apolipoprotein E polymorphism and Parkinson's disease**
G. Akpinar, E. Ergul, I. Kara, H.A. Idrisoglu, K. Bayulkem, A. Sazci (Kocaeli, Turkey)

811 **Prevalence of sporadic Parkinson's disease in Arabic villages in Israel: A door-to-door study**
R. Inzelberg, M. Masarwa, R. Strugatsky, C. Baldwin, L. Farrer, R. Friedland (Kfar Saba, Israel)

812 **Parkinson's disease: A dual hit hypothesis**
C.H. Hawkes, K. Del Tredici, H. Braak (Romford, Essex, United Kingdom)

813 **Increase in vitamins A,C and E in Parkinson's disease following pramipexole treatment**
Y. Iwasaki, K. Ikeda, O. Kano (Tokyo, Japan)

814 **Speech dysfunction in drug-naive patients with early Parkinson's disease and its response to dopaminergic therapy**
H.-W. Shin, H. Kim, S.Y. Kang, Y.H. Sohn (Seoul, Korea)

815 **Hyponatremia and rhabdomyolysis induced by pramipexole during the treatment of Parkinson's disease**
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816 **Pathological gambling secondary to dopaminergic therapy in Parkinson's disease**
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817 **Experiences using Japanese translation of wearing-off questionnaire (19 symptoms)**
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818 **N-acetyltransferase 2 polymorphism and risk factors in early onset Parkinson's disease**
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819 **Better sexual function in women with Parkinson's disease: A case control study**
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820 **The neuronal activity of putamen in patients with Parkinson's disease before treatment**
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821 **Pain patients in Parkinson's disease**
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822 **Smell identification in Parkinson and Alzheimer patients: Are Tabert et al's* odours appropriate for PD?**
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823 **Dietary factors in Korean patients with Parkinson's disease**
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824 **Alpha-synuclein-overexpressing neurosphere as an in vitro model of alpha-synucleinopathies**
M. Fukuda-Tani, T. Yasuda, H. Mochizuki, Y. Mizuno (Tokyo, Japan)

825 **Direct and indirect costs in Parkinson's disease: A patient survey**
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826 **The familial Parkinsonism gene LRRK2 regulates neurite process morphology**
D. MacLeod, K. Inoue, A. Abeliovich (New York, New York, USA)

827 **Urinary dysfunction in Parkinson's disease**
H. Blackett, R. Walker, B. Wood (Ashington, Northumberland, United Kingdom)

828 **Results of rotigotine transdermal patch in advanced Parkinson's patients with motor fluctuations and in combination with levodopa: Results of the CLEOPATRA-PD trial**
W. Poewe, W.H. Oertel, E. Martignoni, E. Tolosa, N.P. Quinn, B. boroojerdi, M. Rupp (Innsbruck, Austria)

829 **Screening for Parkinson's disease in underserved communities in Alachua County, Florida**
R.L. Stephen, M.S. Okun, C.W. Garvan, C.E. Jacobson, R.L. Rodriguez, H.H. Fernandez (Ganesville, Florida, USA)

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830 **In vivo magnetic resonance imaging, sensorimotor behavioral and pathological phenotyping of aged PLP-SYN transgenic mouse model of multiple system atrophy**
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831 **The "risus sardonicus": A warning sign of multiple system atrophy**
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832 **Intracranial dural arteriovenous fistula presenting with Parkinsonism**
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833 **"Applause Sign" secondary to infiltrative cerebral lymphoma**
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834 **The specificity and sensitivity of "applause sign" in differentiating PSP and other parkinsonian syndromes**
J. Wu, O. Sitburana, J. Jankovic (Houston, Texas, USA)

835 **A new American kindred with hereditary diffuse leukoencephalopathy with spheroids (HDLS)**
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836 **Epidemiological data of nervous diseases in Ukraine**
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837 **Atypical PSP: A radiological diagnosis**
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838 **A combined case of tauopathy and Alpha-synucleinopathy**
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839 **Normal pressure hydrocephalus and vascular parkinsonism: Discrete or overlapping clinical entities?**
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840 **Manganese encephalopathy due to methcathinone abuse**
O.S. Levin, N.A. Amosova, N.V. Fedorova (Moscow, Russian Federation)

841 **A focus on head drop and camptocormia**
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842 **Acquired hepatocerebral degeneration and dopamine transporter imaging using [123I]-FP-CIT SPECT**
J.-M. Kim, Y.K. Kim, S.E. Kim, B.S. Jeon (Seongnam-si, Korea)

843 **Possibility of development of forms of pathological dependence on levodopa preparations and its prevention**
I.V. Bogdanova (Kharkiv, Ukraine)

844 **Possibility of development of secondary Parkinsonism caused by parasitary diseases**
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845 **Olfaction in dardarin/LRRK2 associated Parkinsonism**
L. Silveira Moriyama, L.C. Guedes, A. Kingsbury, J.J. Ferreira, C. Sampaio, E.R. Barbosa, V. Bonifati, N.P. Quinn, A.J. Lees (London, United Kingdom)

846 **Annonacin, a natural mitochondrial complex I inhibitor, causes tau pathology in cultured neurons**
M. Escobar Khondiker, M. Höllerhage, P.P. Michel, M.-P. Muriel, P. Champy, T. Yagi, A. Lannuzel, E.C. Hirsch, W.H. Oertel, R. Jacob, M. Ruberg, G.U. Höglinger (Marburg, Germany)

847 **Unusual presentation of progressive supranuclear palsy with palatal and diaphragmal myoclonus: A case report**
N.M. Browner, S. Fahn (New York, New York, USA)

848 **Treatment of camptocormia by ultrasound-guided deep ventral injection of botulinum toxin to the iliopsoas muscle**
R. von Coelln, A. Raible, F. Asmus (Tuebingen, Germany)

849 **Anti-beta2-glycoprotein I antibody and vascular Parkinsonian**
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850 **Comparison of brain MRI and 18F-FDG PET in the differential diagnosis of multiple system atrophy from Parkinson's disease**
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851 **The cognitive profile versus motor severity and clinical course of patients with Parkinsonism associated to vascular disease (vascular Parkinsonism) and Parkinson's disease**
C. Panea, H. Nicolae, I. Codita, G. Vulpe (Bucharest, Romania)

852 **Severity of tau deposition in progressive supranuclear palsy is associated with clinical phenotype**
D.R. Williams, J.L. Holton, A.J. Lees, T. Revesz (Melbourne, VIC, Australia)

853 **A patient with Gaucher's disease successfully treated with pallidotomy, a 3-year follow up**
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854 **CBD – correlation of FDG PET, MRI and cognitive features**
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855 **Parkinson plus syndromes in a primary peripheral neurological center**
F.R. Rodolico (Giarre, Sicily - CT, Italy)

856 **High dose levodopa therapy is not toxic in multiple system atrophy: Experimental evidence**
N. Stefanova, M. Köllensperger, M. Hainzer, A. Cenci, W. Poewe, G.K. Wenning (Innsbruck, Austria)

857 **PSP/CBD overlap – a case series**
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858 **Anal sphincter EMG in the diagnosis of atypical Parkinsonian syndromes**
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859 **Sleep disorders in Parkinson's disease: A correlation with clinical characteristics**
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860 **Parkinsonism as late-onset side effect of cerebral radiotherapy. A case report**
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861 **Acute akinetic mutism due to subdural tension pneumocephalus**
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862 **Red flags for multiple system atrophy**
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863 **Creutzfeldt-Jacob disease mimicking progressive supranuclear palsy**
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864 **Neurological features of Wilson's disease precipitated by liver transplantation**
K.E. Kotschet, A.J. Hughes (Fitzroy, VIC, Australia)

865 **Pattern of cerebrospinal fluid tau forms is altered in progressive supranuclear palsy**
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866 **Clinical characterization of a Chilean family with Kufor Rakeb disease and mutations in ATP13A2, a lisosomal ATPase**
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867 **Atypical PSP: A representative case series**
V.K. Gontu, D.P. Auer, N.B. Bajaj (Derby, United Kingdom)

868 **Isolated gait ignition failure: Abnormalities in pre- and post-synaptic dopamine receptor imaging**
M.C. Kraus, U. Haberkorn, H.-M. Meinck (Heidelberg, Germany)

869 **Clinical phenptypes of Parkinson's disease: How does psychopathology cluster with motor symptoms?**
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870 **Clinical and imaging characteristics of a dominant kindred with benign Parkinsonism and dopa-responsive dystonia**
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871 **Reversible parkinsonism in a patient with Whipple's disease**
E. Gasparoli, P. Zamboni, M. Siviero, R. Manara, R. Marcolongo, N. Bonetto, C. Briani (Padova, Italy)

872 **Progressive multifocal leucoencephalopathy (PML) presenting as Parkinsonism in an HIV positive man**
K.L. Poston, D.L. Raszl (New York, New York, USA)

873 **Freezing of gait in older adults with high level gait disorders: Association with impaired executive function**
N. Giladi, V. Huber-Mahlin, T. Herman, J.M. Hausdorff (Tel Aviv, Israel)

874 **Parkinsonism in antiphospholipid syndrome – a case report and literature review**
Y.-R. Wu, Y.-C. Huang, R.-K. Lyu (Taipei, Taiwan)

875 **CSF hypocretin-1 levels are normal in multiple system atrophy**
W.F. Abdo, B.R. Bloem, B. Kremer, G.-J. Lammers, M.M. Verbeek, S. Overeem (Nijmegen, Netherlands)

876 **Brain energy metabolism and effects of coenyzme Q10 (CoQ10) in progressive supranuclear palsy (PSP)**
M. Stamelou, U. Pilatus, K.M. Eggert, W.H. Oertel, G.U. Hoeglinger (Marburg, Germany)

877 **Levodopa response in parkinsonism with multiple mitochondrial DNA deletions**
R.A. Wilcox, A. Churchyard, H. Dahl, W. Hutchinson, D. Kirby, D. Thyagarajan (Brisbane, QLD, Australia)

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878 **A patient survey assessing symptomology and treatment trends of Restless legs syndrome in the UK**
S. Tluk, A. Bharkhada, E. Gill, K. Ray Chaudhuri (London, England, United Kingdom)

879 **Lack of drug drug interactions between transdermal rotigotine and oral contraceptives**
M. Braun, J.-P. Elshoff, J.-O. Andreas, B. Strauss, R. Horstmann (Monheim am Rhein, Germany)

880 **Clinical characteristics and prevalence of Restless legs syndrome in orhangazi district of Bursa, Turkey (a population-based door to door study) (Bursa, Turkey)**
S. Erer, M. Zarifoglu, N. Karli, S. Akgoz, C. Cavdar (Bursa, Turkey)

881 **Restless legs syndrome in Parkinson's disease – own experience**
A. Budzianowska, M. Golab-Janowska, K. Honczarenko (Szczecin, Poland)

882 **Restless legs syndrome (RLS): A community-based study from Argentina**
G. Persi, A. Ayarza, J.L. Etcheverry, V. Parisi, G. Pariso, E.M. Gatto (Buenos Aires, Argentina)

883 **Botulinum toxin a treatment can improve symptoms of Restless legs syndrome**
D. Richardson, R. Bajwa, M. Eisa, D. Miller, V. Mohsenin, B. Jabbari (New Haven, Connecticut, USA)

884 **Restless legs syndrome and chiari type 1 malformation**
Y. Kaplan (Tokat, Turkey)

885 **Disruption of working life among persons with moderate to severe Restless legs syndrome**
E. Lainey, S. Albrecht, J. Koester (Ridgefield, Connecticut, USA)

886 **Clinical characterization of familial and sporadic Restless legs syndrome**
L.A. Brown, S.-C. Lin, J.E. Young, R.J. Uitti, Z.K. Wszolek (Jacksonville, Florida, USA)

887 **Pregabalin in Restless legs syndrome with and without neuropathic pain**
M. Sommer, C.G. Bachmann, K.M. Liebetanz, J. Schindehütte, T. Tings, W. Paulus (Goettingen, Germany)

888 **Pramipexole is effective treatment for RLS patients suffering from afternoon or early evening RLS symptoms**
A.S. Walters, E. Lainey, J. Koester (Edison, New Jersey, USA)

889 **Burden of illness associated with Restless legs syndrome: Findings from patients visiting primary care settings in the US**
R.P. Allen, W.J. Kwong, M.O. Calloway, L. Palmer (Baltimore, Maryland, USA)

890 **Restless legs syndrome and menopause**
Y. Kaplan, H. Aytan, F. Demirturk, A.C. Caliskan (Tokat, Turkey)

891 **Pramipexole for Restless legs syndrome (RLS) in patients with comorbid cardiovascular (CV) disease**
J.W. Winkelman, E. Lainey, J. Koester (Brighton, Massachusetts, USA)

892 **Restless arms syndrome heralding MGUS-related anti-MAG polyneuropathy**
J. Horvath, T. Landis, P.R. Burkhard (Geneva, Switzerland)

893 **MRI determined brain iron deficiency in Restless legs syndrome (RLS)**
J. Godau, K.J. Schweitzer, A. Di Santo, T. Gasser, D. Berg, U. Klose (Tuebingen, Germany)

894 **Prevalence of Restless legs syndrome in a primary-care population**
R.P. Allen, M.O. Calloway, W.J. Kwong, L. Palmer (Baltimore, Maryland, USA)

895 **Cognitive functions in patients with Restless legs syndrome**
S. Fulda, J. Winkelmann, T.C. Wetter (Munich, Germany)

896 **Pramipexole improves daytime symptoms among patients with Restless legs syndrome (RLS) with impaired daytime function**
C.A. Kushida, S. Albrecht, J. Koester (Stanford, California, USA)

897 **Pain in the Restless legs syndrome is more common in patients with frequent RLS**
W.A. Hening, R.P. Allen, C.J. Earley, C. Allen, C. Hening (New York, New York, USA)

898 **Circadian time course of laser evoked potentials (LEP) and laser induced pain thresholds in patients with idiopathic RLS**
C.G. Bachmann, C. Harder, T. Tings, C. Baier, W. Paulus, S. Happe (Goettingen, Germany)

899 **Where dopamine meets opioids: A meta-analysis of the placebo effect in RLS treatment studies**
S. Fulda, T.C. Wetter (Munich, Germany)

900 **Dose-response relationships for pramipexole in Restless legs syndrome**
K.D. Sethi, E. Lainey, J. Koester (Augusta, Georgia, USA)

901 **Rotigotine transdermal patch provides high responder rates in patients with Restless legs syndrome – 24 month results from a multi-national, multi-centre, open-label, follow-up trial**
C. Trenkwalder, K. Stiasny-Kolster, D. Garcia-Borreguero, B. Hoegl, J. Keffel, E. Schollmayer, W.H. Oertel (Kassel, Germany)

902 **The prevalence of Restless legs syndrome and its association with peripheral neuropathy in dialysis patients**
A. Bogucki, A. Pozdzik-Koseda, J. Wyroslak (Zgierz, Poland)

903 **Restless legs syndrome – a clinical, etiological and electrophysiological study**
S. Vanchilingam, M. Umaiorubahan (Chennai, Tamilnadu, India)

904 **Sleep problems in patients with RLS have a negative impact on quality of life and increase the RLS health burden**
R.P. Allen, P. Stillman, A.J. Myers (Baltimore, Maryland, USA)

Spasticity

Poster numbers 905-917

905 **Autosomal dominant spastic paraplegia (SPG36) with sensory deficits and muscle wasting maps to chromosome 12q23-24**
K. Karle, M. Bonin, A. Durr, S. Forlani, J. Kassubeck, S. Klimpe, A. Seibel, B.P.C. van de Warrenburg, P. Bauer, L. Schols (Tubingen, Germany)

906 **SPG10 is responsible for about 3% of autosomal dominant spastic paraplegia in Germany**
K. Karle, R. Schule, J. Kassubeck, S. Klimpe, T. Klopstock, S. Otto, L. Schols (Tubingen, Germany)

907 **Retrospective cross-over evaluation of two botulinum toxin type A preparations (Botox® and Dysport®) in the treatment of upper limb spasticity**
Y. Parman, H. Hanagasi, B. Topcular (Istanbul, Turkey)

908 **Botulinum toxin to treat spasticity secondary to ipsilateral cerebellopontine oligodendroglioma**
A.M.L. Quek, R.C.S. Seet, E.C.H. Lim (Singapore)

909 **Quality of life following botulinum toxin (Dysport) in upper limb spasticity following stroke**
A. Hughes, I. Baguley, L. Davies, S. de Graaff, P. Katrak, P. McCrory, J. Sandanam (Melbourne, VIC, Australia)

910 **Clinical and electrophysiological evaluation of post stroke spasticity – an attempt to correlate**
R.R. Garlapati, M. Umaiorubahan (Chennai, Tamilnadu, India)

911 **Spasticity treatment with BTX-A improves the functional hand development in patients with cervical spinal cord injury**
E. Gasparoli, F. Piccione, A. Merico, M. Cavinato (Venezia Lido, VE, Italy)

912 **A "N=1" randomized placebo-controlled multiple cross-over pilot study of FP0011, a novel antiglutamate agent, in advanced PD**
O.O. Rascol, L. Lacomblez, J. Ferreira, L. Negre-Pages, J.-C. Lemarie, L. Bossi (Toulouse, France)

913 **Comprehensive spasticity treatment for institutionalized adults with mental retardation**
C.E. Gill, C.R. Blair, H.M. Taylor, C. Nixon, P.D. Charles (Nashville, Tennessee, USA)

914 **Analysis of surgical intrathecal [i.t.] baclofen [ITB] implant results emphasizing revision surgery in a mixed pediatric/adult population**
Y.M. Awaad, N. Roosen, K. McIntosh, M. Waines (Bloomfield Hills, Michigan, USA)

915 **Functional assessment following intrathecal baclofen therapy in children with spastic cerebral palsy**
Y.M. Awaad (Bloomfield Hills, Michigan, USA)

916 **Retrospective cross-over evaluation of two botulinum toxin type A preparations (Botox® and Dysport®) in the treatment of lower limb spasticity**
Y. Parman, H. Hanagasi, B. Topcular (Istanbul, Turkey)

917 **Botulinum toxin treatment for hip flexor spasticity in older children and adults – a report on 22 patients**
A. Stenner, G. Reichel, W. Hermann (Zwickau, Germany)

Tics

Poster numbers 918-933

918 **Different perception of tourette syndrome among patients, relatives and physicians**
E. Cubo, J. Rivera, J. Almazan (Burgos, Spain)

919 Adult onset simple phonic tic after caudate stroke
G. Meritxell, P.-S. Claustre, P. Victor, V. Rosa, O. Carlos, R. Jaume (Barcelona, Spain)

920 Deep brain stimulation for tourette syndrome: "Hope or hype?" Personal remarks
D. Servello, M. Sassi, S. Defendi, A. Brambilla, M. Porta (Milan, Italy)

921 Fragile X syndrome associated with tic disorders
S.A. Schneider, M.M. Robertson, R. Rizzo, J. Turk, K.P. Bhatia, M. Orth (London, United Kingdom)

922 Determinants of quality of life in Gilles de la Tourette syndrome
S.S. Al Faqih (Ramadi, Iraq)

923 Motor tics in a patient with Joubert syndrome
A.A. Contreras, J.J. Guzman de Villoria, A.A. Traba, F.F. Grandas (Madrid, Spain)

924 Quality of life of patients with Gilles de la Tourette's syndrome: Results of the pilot study
F. Galland, L. Malet, Y. Worbe, A. Hartman, L. Mallet, P.-P. Derost, D. Morand, I. de Chazeron, P.-M. Llorca, Y. Agid, F. Durif, I. Jalenques (Clermont-Ferrand, France)

925 Ziprasidone in treatment of tics in Tourette syndrome
M. Blazquez-Estrada, M.T. Calatayud-Noguera, B. Blazquez-Menes (Oviedo, Asturias, Spain)

926 A case of a patient with coexistent Tourette syndrome and benign hyperbilirubinemia
S.G. Khachatryan, Z.D. Tavadyan, G.R. Melikyan (Yerevan, Armenia)

927 Two cases of coexistent Tourette syndrome and temporal lobe epilepsy
Z.D. Tavadyan, S.G. Khachatryan, G.R. Melikyan (Yerevan, Armenia)

928 Biofeedback assisted relaxation training for children and adolescents with tics and associated disorders
S. Natriashvili, U. Haller, S. Ohmann, C. Popow (Vienna, Austria)

929 Excitability of cortico-spinal system at rest is associated with tic severity in Gilles de la Tourette syndrome
M. Orth, A. Münchau, J.C. Rothwell (London, United Kingdom)

930 Behavioral deficits in rats selectively bred for deficient prepulse inhibition of the startle response
K. Schwabe, M. Dieckmann, J.K. Krauss, M. Koch (Hannover, Germany)

931 Motor and behavioral outcomes after bilateral GPi deep brain stimulation for severe Tourette syndrome
J. Shahed, J. Poysky, C. Kenney, R. Simpson, J. Jankovic (Houston, Texas, USA)

932 Tic disorders associated to epilepsy: 2 cases
H. Alonso-Navarro, T. Adeva-Bartolomé, F.J. Jiménez-Jiménez (Salamanca, Spain)

933 Early-onset Tourette syndrome
F. Richer, P. Lesperance, S. Chouinard, G. Rouleau (Montreal, Quebec, Canada)

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Poster numbers 934-973

934 A new familial disorder: Saccadic oscillations of the eyes
A.G. Shaikh, K. Miura, L.M. Optican, S. Ramat, R.J. Leigh, D.S. Zee (Baltimore, Maryland, USA)

935 Novel molecular mechanism of essential tremor – a computational approach
A.G. Shaikh, S. Ramat, L.M. Optican, K. Miura, D.S. Zee (Baltimore, Maryland, USA)

936 Connexin gap junctions – neurophysiological correlate and therapeutic target for oculopalatal tremor
A.G. Shaikh, S. Hong, D. Solomon, K. Liao, L.M. Optican, R.J. Leigh, D.S. Zee (Baltimore, Maryland, USA)

937 The effect of muscle loading on tremor dynamical characteristics in the essential tremor patients
S. Blesic, J. Maric, N. Dragasevic, S. Milanovic, V.S. Kostic, M.R. Ljubisavljevic (Al Ain, United Arab Emirates)

938 Effectiveness of piracetam in action tremor/ myoclonus of patients with Parkinson's disease
R. Neshige (Kurume City, Fukuoka, Japan)

939 An open label study of pramipexole for the treatment of essential tremor
L. Lay-Son, D. Saez, O. Trujillo (Santiago, Chile)

940 Disappearance of essential tremor after capsular infarction
N.S. Oztekin, M.F. Oztekin (Ankara, Turkey)

941 Impaired motor speech and balance control in essential tremor
M. Kronenbuerger, P. Buderath, B. Frank, C. Fromm, V.A. Coenen, V.M. Tronnier, K.L. Kiening, W. Ziegler, D. Timmann (Aachen, Germany)

942 Essential tremor – easy to see, difficult to describe and control
N. Yardimci, S. Benli (Ankara, Turkey)

943 **Health-related quality of life in essential tremor patients undergoing deep brain stimulation**
C. Kenney, A. Diamond, A. Davidson, L. Shinawi, J. Jankovic (Houston, Texas, USA)

944 **The spectrum of orolingual tremor – a proposed classification system**
M.A. Silverdale, S.A. Schneider, K.P. Bhatia, A.E. Lang (Manchester, United Kingdom)

945 **Evaluation of postoperative outcome on tremor due to posterior fossa tumors**
T.M. Kinfe, H.-H. Capelle, J.K. Krauss (Hannover, Germany)

946 **Unilateral tremor associated with autosomal dominant essential tremor**
P. Hedera, F. Phibbs, J.Y. Fang, P.D. Charles, M.K. Cooper, T.L. Davis (Nashville, Tennessee, USA)

947 **Internal Family Systems psychotherapy successfully applied in two cases of psychogenic tremor**
F.P. Le Doze, L. Carluer, G.L. Defer, R.C. Schwartz (Caen Cedex, France)

948 **Dopa- responsive pseudo-orthostatic tremor in parkinsonism**
A. Thomas, L. Bonanni, S. Varanese, F. Anzellotti, K. Armellino, A. D'Andreagiovanni, D. Monaco, M. Onofrj (Pescara, Italy)

949 **Lack of association between catecholamine-O-methyl transferase Val158Met polymorphism and essential tremor**
E. Ergul, A. Sazci, K. Bayulkem (Kocaeli, Turkey)

950 **Adult-onset Alexander disease with palatal tremor and intraventricular tumor**
Y. Okuma, T. Hirayama, J. Fukae, K. Noda, K. Fujishima, N. Hattori (Izunokuni, Shizuoka Prefecture, Japan)

951 **Confirmation that dystonic tremor with features of parkinsonism is a cause of scans without evidence of dopaminergic deficit (SWEDDs)**
D.J. Hensman, J.W. Frank, P.G. Bain (London, United Kingdom)

952 **Quantitative tremor analysis in 300 consecutive tremor patients**
M. Löhle, T. Glöckler, I. Hoffmann, K. Kreutzmann, S. Junghanns, M. Wolz, H. Reichmann, A. Storch (Dresden, Saxony, Germany)

953 **The effect of oxcarbazepine on essential tremor**
N. Yardimci, S. Benli (Ankara, Turkey)

954 **Bilateral effects of unilateral deep brain stimulation**
N. Kovacs, I. Balas, L. Kellenyi, E. Pal, F. Nagy (Pecs, Hungary)

955 **The differences of characteristics in physiologic tremor between dominant and non-dominant hand in normal population**
I.-U. Song, J.-S. Kim, D.-S. Jeong, K.-S. Lee (Seoul, Republic of Korea)

956 **Blood harmane concentration is correlated with cerebellar metabolism in essential tremor**
E.D. Louis, W. Zheng, X. Mao, D.C. Shungu (New York, New York, USA)

957 **Does Parkinsonian tremor influence patients' quality of life (QOL)?**
T. Kondo, Y. Kajimoto, I. Nakanishi (Wakayama, Japan)

958 **Validity of family history in essential tremor**
P.K. Manharlal, S. Fook-Choong, Y. Yuen, T.E. King (Singapore, Singapore)

959 **Clinical characteristics and prevalence of essential tremor in orhangazi district of Bursa, Turkey (a population-based door to door study) (Bursa, Turkey)**
S. Erer, M. Zarifoglu, N. Karli, A. Semra, Y. Demet (Bursa, Turkey)

960 **Harmonic frequencies in tremor**
P.H. Kraus, A. Hoffmann, G. Ellrichmann (Bochum, Germany)

961 **Essential tremor characteristics during different arm posture positions and mechanical load**
N. Dragasevic, S. Radovanovic, J. Maric, A. Tomic, N. Kresojevic, I. Petrovic, M. Svetel, V.S. Kostic (Belgrade, Serbia)

962 **Unique software algorithms for tremor analysis – comparing the novel approach and standard techniques**
A.G. Shaikh, T.O. Crawford, R.M. Tripp, D.S. Zee (Baltimore, Maryland, USA)

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F.M. Oztekin, N.S. Oztekin (Ankara, Turkey)

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E.D. Louis, J.E. Axelrad, L.S. Honig, I. Flores, G.W. Ross, R. Pahwa, K.E. Lyons, P.L. Faust, J.P.G. Vonsattel (New York, New York, USA)

965 **Tremor associated to chronic inflammatory demyelinating peripheral neuropathy (CIDP): Treatment with Pregabalin**
H. Alonso-Navarro, A. Fernández-Díaz, M. Martín-Prieto, J.J. Ruiz-Ezquerro, T. López-Alburquerque, F.J. Jiménez-Jiménez (Salamanca, Spain)

966 **Isolated tongue tremor after removal of cerebellar pilocytic astrocytoma: Functional analysis with Subtracted ictal SPECT coregistered to MRI study**
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967 **Provoking Parkinsonian tremor**
J. Raethjen, K. Austermann, F. Papengut, G. Deuschl (Kiel, Germany)

968 **Clinical features of Parkinsonian tremor**
F. Papengut, J. Raethjen, G. Deuschl (Kiel, Germany)

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J. Roggendorf, J. Vent, M. Maarouf, C. Haense, A. Thiel, G.R. Fink, R. Hilker (Koeln, Germany)

970 **Reconstruction of the petrosal bone for treatment of kinetic tremor due to cerebellar herniation and torsion of cerebellar outflow pathways**
T. Kinfe, O. Sedlaczek, W. Bergler, C. Blahak, M. Hennerici, J.K. Krauss (Hannover, Germany)

971 **Long duration accelometry to assess efficacy of oral 1-octanol in patients with essential tremor**
F.B. Nahab, S. Baines, D. Ippolito, M. Hallett (Bethesda, Maryland, USA)

972 **Palatal tremor and ataxia associated with sporadic adult-onset Alexander's disease**
N. Jodoin, C. Vandendries, D. Grabli, G. Bruneteau, D. Rodriguez (Paris, France)

973 **Experience in therapy of essential tremor (ET) combined with arterial hypertension (AH) by prolonged beta-adrenoblockators (Dilatrend, Carvedilol): The pilot study**
D.V. Pokhabov, V.G. Abramov (Krasnoyarsk, Russian Federation)

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REQUIP (ropinirole) Prescribing Information

Presentation 'ReQuip' Tablets, PL 10592/0085-0089, each containing ropinirole hydrochloride equivalent to either 0.25, 0.5, 1, 2 or 5 mg ropinirole. Starter Pack (105 tablets), £40.10. Follow On Pack (147 tablets), £74.40; 1 mg tablets - 84 tablets, £47.26; 2 mg tablets - 84 tablets, £94.53; 5 mg tablets - 84 tablets, £163.27. **Indications** Treatment of idiopathic Parkinson's disease. May be used alone (without L-dopa) or in addition to L-dopa to control "on-off" fluctuations and permit a reduction in the L-dopa dose. **Dosage** *Adults:* Three times a day, with meals. Titrate dose against efficacy and tolerability. Initial dose for 1st week should be 0.25 mg t.i.d., 2nd week 0.5 mg t.i.d., 3rd week 0.75 mg t.i.d., 4th week 1 mg t.i.d. After initial titration, dose may be increased in weekly increments of up to 3mg/day until acceptable therapeutic response established. If using Follow On Pack, the dose for 5th week is 1.5mg t.i.d., 6th week 2.0mg t.i.d., 7th week 2.5mg t.i.d., 8th week 3.0mg t.i.d. Do not exceed 24 mg/day. Concurrent L-dopa dose may be reduced gradually by around 20%. When switching from another dopamine agonist follow manufacturer's guidance on discontinuation. Discontinue ropinirole by reducing doses over one week. Renal or hepatic impairment: No change needed in mild to moderate renal impairment. Not studied in severe renal or hepatic impairment - administration not recommended. Elderly: Titrate dose in normal manner. Children: Parkinson's disease does not occur in children - do not give to children. **Contra-indications** Hypersensitivity to ropinirole, pregnancy, lactation and women of child-bearing potential unless using adequate contraception. **Precautions** Caution advised in patients with severe cardiovascular disease and when co-administering with anti-hypertensive and anti-arrhythmic agents. Patients with major psychotic disorders should be treated with dopamine agonists only if potential benefits outweigh the risks. Ropinirole has been associated with somnolence and episodes of sudden sleep onset. Patients must be informed of this and advised to exercise caution while driving or operating machines during treatment with ropinirole. Patients who have experienced somnolence and/or an episode of sudden sleep onset must refrain from driving or operating machines. Caution advised when taking other sedating medication or alcohol in combination with ropinirole. If sudden onset of sleep occurs in patients, consider dose reduction or drug withdrawal. **Drug interactions** Neuroleptics and other centrally active dopamine antagonists may diminish effectiveness of ropinirole - avoid concomitant use. No dosage adjustment needed when co-administering with L-dopa or domperidone. No interaction seen with other Parkinson's disease drugs but take care when adding ropinirole to treatment regimen. Other dopamine agonists may be used with caution. In a study with concurrent digoxin, no interaction seen which would require dosage adjustment. Metabolised by cytochrome P450 enzyme CYP1A2 therefore potential for interaction with substrates or inhibitors of this enzyme - ropinirole dose may need adjustment when these drugs are introduced or withdrawn. Increased plasma levels of ropinirole have been observed with high oestrogen doses. In patients on hormone replacement therapy (HRT) ropinirole treatment may be initiated in normal manner, however, if HRT is stopped or introduced during ropinirole treatment, dosage adjustment may be required. No information on interaction with alcohol - as with other centrally active medications, caution patients against taking ropinirole with alcohol. **Pregnancy and lactation** Do not use during pregnancy - based on results of animal studies. There have been no studies of ropinirole in human pregnancy. Do not use in nursing mothers as lactation may be inhibited. **Adverse reactions** In early therapy: nausea, somnolence, leg oedema, abdominal pain, vomiting and syncope. In adjunct therapy: dyskinesia, nausea, hallucinations and confusion. Postural hypotension, which is commonly associated with dopamine agonists, and decreases in systolic blood pressure have been noted; symptomatic hypotension and bradycardia, occasionally severe, may occur. As with another dopamine agonist, extreme somnolence and/or sudden onset of sleep have been reported rarely, occasionally when driving (see 'Precautions' and 'Effects on ability to drive and use machines'). **Effects on ability to drive and use machines** Patients being treated with ropinirole and presenting with somnolence and/or sudden sleep episodes must be informed to refrain from driving or engaging in activities where impaired alertness may put themselves or others at risk of serious injury or death (e.g. operating machines) until such recurrent episodes and somnolence have resolved. **Overdosage** No incidences reported. Symptoms of overdose likely to be related to dopaminergic activity.

POM

Marketing Authorisation Holder SmithKline Beecham plc t/a GlaxoSmithKline, Stockley Park West, Uxbridge, Middlesex UB11 1BT.

Further information is available from: Customer Contact Centre, GlaxoSmithKline, Stockley Park West, Uxbridge, Middlesex UB11 1BT; customercontactuk@gsk.com; Freephone 0800 221 441.

Prescribing information last revised: November 2005.

In order to continually monitor and evaluate the safety of ReQuip, we encourage healthcare professionals to report adverse events, pregnancy, overdose and unexpected benefits to GlaxoSmithKline on 0800 221 441. Please consult the Summary of Product Characteristics for full details on the safety profile of ReQuip. Information about adverse event reporting can also be found at www.yellowcard.gov.uk.

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