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Course Directors:

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Carlo Besta Milan, Italy

Neuroimaging and Pathology Biomarkers in Parkinson's disease

Milan PD Biomarkers Initiative



MILAN, SEPTEMBER 12/13 2025

Starhotels Ritz

Via Lazzaro Spallanzani, 40
20129 - MILANO

parkinsonlimpedismov.it

DAY 1 - Friday, September 12 2025

13.30 Registration and Course Material pick-up

14.00 **Welcome**

T. van Eimeren (Cologne, Germany), *R. Cilia* (Milan, Italy)

14.10 **Institutional greetings from the IRCCS Foundation “Carlo Besta” Neurological Institute**
Giuseppe Lauria Pinter (Scientific Director), *Roberto Eleopra* (Director of the Parkinson and Movement Disorders Unit)

SESSION 1 IMAGING NEUROTRANSMITTER DYSFUNCTION: DOPAMINE & NORADRENALINE

14.30-15.30 **Chairs:** *A. Strafella* (Toronto, Canada), *R. Cilia* (Milan, Italy)

14.30 **Dopaminergic Dysfunction: Molecular Biomarkers**

R. Ceravolo (Pisa, Italy)

14.50 **Dopaminergic Dysfunction: MRI Biomarkers**

S. Lehericy (Paris, France)

15.10 **Noradrenergic Dysfunction: Molecular and MRI Biomarkers**

B. Ballanger (Lyon, France)

15.30 Coffee Break

SESSION 2 IMAGING NEUROTRANSMITTER DYSFUNCTION: ACETYLCHOLINE AND SEROTONIN

16.00-17.00 **Chairs:** *T. van Eimeren* (Cologne, Germany), *A. Tessitore* (Naples, Italy)

16.00 **Cholinergic Dysfunction: Molecular Biomarkers**

J. Horsager (Aarhus, Denmark)

16.20 **Cholinergic Dysfunction: MRI Biomarkers**

N. Ray (Manchester, UK)

16.40 **Serotonergic Dysfunction: Molecular Biomarkers**

N. Pavese (Newcastle, UK)

17.00 **Discussion** (Chairs and Speakers)

18.00 **Closing Remarks End of 1st Day**

T. van Eimeren (Cologne, Germany), *R. Cilia* (Milan, Italy)

20.00-22.00 Faculty Dinner

08.45 **Welcome**
T. van Eimeren (Cologne, Germany), *R. Cilia* (Milan, Italy)

SESSION 3 IMAGING BRAIN PATHOLOGY

09.00-10.20 **Chairs:** *A. Strafella* (Toronto, Canada), *A. Del Sole* (Milan, Italy)

9.00 **Imaging Alpha-synuclein pathology**
H. Endo (Chiba, Japan)

9.20 **Imaging Tau pathology**
T. van Eimeren (Cologne, Germany)

9.40 **Imaging Amyloid and copathology**
A. Del Sole (Milan, Italy)

10.00 **Imaging Neuroinflammation**
A.P. Strafella (Toronto, Canada)

10.20 Coffee Break

SESSION 4 IMAGING PARKINSON'S DISEASE PROGRESSION AND ATYPICAL PARKINSONISMS

10.40-12.00 **Chairs:** *R. Eleopra* (Milan, Italy), *I. Rektorová* (Brno, Czech Republic)

10.40 **Imaging Cognitive Impairment**
I. Rektorová (Brno, Czech Republic)

11.00 **Staging Parkinson's Disease: A Network Perspective**
R. De Micco (Naples, Italy)

11.20 **Updates on Neuroimaging approaches in Deep Brain Stimulation**
M.M. Reich (Wuerzburg, Germany)

11.40 **Imaging Biomarkers in Atypical Parkinsonian Disorders**
A. Quattrone (Catanzaro, Italy)

12.00 **Discussion** (*Chairs and Speakers*)

13.00 Lunch

DAY 2B – Saturday, September 13, 2025

SESSION 5 FROM BEDSIDE TO BENCH: FOCUS ON PATHOLOGY

14.00-15.20 *Chairs:* F. Tagliavini (Milan, Italy), L. Parkkinen (Oxford, UK)14.00 **Alpha-Synuclein: New discoveries and potential therapeutic applications**
T. Outeiro (Gottingen, Germany)14.20 **Alpha-Synuclein Seed Amplification Assay: Present and Future**
F. Moda (Milan, Italy)14.40 **Update on the role Skin Biopsy in the diagnosis of Parkinsonism**
M. Nolano (Naples, Italy)15.00 **The Role of Copathology in Parkinson's disease: the Neuropathologist's Perspective**
L. Parkkinen (Oxford, UK)15.20 **Discussion** (*Chairs and Speakers*)

16.00 Coffee Break

SESSION 6 TRACKING THE PROGRESSION OF PARKINSON'S DISEASE

16.30-17.50 *Chairs:* R. Cilia (Milan, Italy), T. van Eimeren (Cologne, Germany)16.30 **Prodromal stages of Synucleinopathies: Sleep and Glymphatic dysfunction**
D. Arnaldi (Genoa, Italy)16.50 **The concept of Motor and Cognitive reserve vs. compensation in Neurodegenerative disorders** - *M. Hönig* (Cologne, Germany)17.10 **Management of Parkinson's disease: oral and infusion pharmacological approaches**
V. Leta (Milan, Italy)17.30 **Management of Parkinson's disease: surgical approaches**
A. Fasano (Milan, Italy)17.50 **Discussion** (*Chairs and Speakers*)18.30 **CME Forms and Closing Remarks**
T. van Eimeren (Cologne, Germany), *R. Cilia* (Milan, Italy)