

# MDS Curriculum Track: Parkinson's Disease – Advances in Pathology, Genetics, Biomarkers, and Therapeutics – Part 2

## Track Description and Learning Objectives

The MDS Curriculum Track: Parkinson's Disease – Advances in Pathology, Genetics, Biomarkers, and Therapeutics – Part 2 will provide a summary of recent advances in the field of Parkinson's disease, with a focus on mechanisms and care in atypical parkinsonism and in-depth management of patients with advanced therapies.

### LEARNING OBJECTIVES

1. Understand pathology and pathomechanisms of atypical Parkinsonism.
2. Adapt knowledge to develop a personalized treatment plan for patients with Parkinson's disease, including advanced therapies and troubleshooting.

## Module 1: Translating Mechanisms to Care in Atypical Parkinsonism (3 hours)

This module addresses how advances in knowledge about disease mechanisms – including alpha-synuclein and 4R tau biology – is shaping clinical trials and therapeutic approaches in atypical Parkinsonian syndromes, including multiple system atrophy (MSA), progressive supranuclear palsy (PSP), and corticobasal degeneration (CBD). Global strategies for diagnosis and multidisciplinary care of atypical Parkinsonism are presented.

### RESOURCES:

- **VIDEO: From Basic Science to the Clinic: Multiple System Atrophy**  
Chin Hsien Lin, MD, PhD - National Taiwan University Hospital, Taipei, Taiwan
- **VIDEO: 4R Tauopathies: PSP, CBD**  
Gabor Kovacs, MD, PhD - University of Toronto, Toronto, ON, Canada
- **VIDEO: Applying Best Medical Management Across the Globe**  
Marina Picillo, MD - AOU San Giovanni di Dio e Ruggi d'Aragona, Salerno, Italy
- **VIDEO: Atypical Parkinsonism: Red Flags and Treatable Mimics**  
Jin Whan Cho, MD, PhD - Samsung Seoul Hospital, Sungkyunkwan University, Seoul, South Korea  
Thomas Kimber, MD, PhD - Royal Adelaide Hospital, Adelaide, Australia

## Module 2: Device-Based and Advanced Therapies in Parkinson's Disease (2.5 hours)

This module provides practical guidance on advanced therapies used in Parkinson's disease, including deep brain stimulation, MR-guided focused ultrasound, infusion therapies, apomorphine pump systems, and botulinum toxin injections. Learners will gain insight into clinical indications, troubleshooting, and long-term management.

### RESOURCES:

- **ARTICLE: Implementing Levodopa-Carbidopa Intestinal Gel for Parkinson Disease: Insights from US Practitioners**  
Michelle Burack et al.
- **VIDEO: Troubleshooting Apomorphine Subcutaneous Pump Use**  
Teus van Laar, MD, PhD - University Medical Center Groningen, Groningen, Netherlands
- **ARTICLE: Challenges in PD Patient Management After DBS: A Pragmatic Review**  
Malco Rossi et al.
- **VIDEO: DBS and MRgFUS**  
Maria Fiorella Contarino, MD, PhD - Leiden University Medical Center, Leiden, Netherlands
- **VIDEO: Botulinum Toxin in Parkinsonism**  
Shivam Mittal, MD - Cleveland Clinic Abu Dhabi, Abu Dhabi, United Arab Emirates