

MODULE 1

STRUCTURE, DEVELOPMENT, FUNCTION

January 21-25, 2019

Monday 21 Neuroanatomy

08:00 - 08:30	Introduction to the master	<i>Giuseppe Lauria</i>	<i>Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta</i>
08:30 - 10:30	Macro and microstructure of peripheral nerves	<i>Guido Cavaletti</i>	<i>Experimental Neurology Unit, University Milan Bicocca</i>
10:30 - 11:00	<i>Break</i>		
11:00 - 13:00	Functional anatomy of somatic PNS	<i>Giuseppe Lauria</i>	<i>Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta</i>
13:00 - 14:00	<i>Lunch break</i>		
14:00 - 16:00	Functional anatomy of autonomic nervous system	<i>Roy Freeman</i>	<i>Center for Autonomic and Peripheral Nerve Disorders, Beth Israel Deaconess Medical Center, Harvard (USA)</i>

Tuesday 22 Neurobiology

08:30 - 10:30	Neurobiology of dorsal root ganglia	<i>Mingdong Zhang</i>	<i>Molecular Neurobiology Unit, Karolinska Institute (Sweden)</i>
10:30 - 11:00	<i>Break</i>		
11:00 - 13:00	Neurobiology of autonomic ganglia	<i>Alessandro Furlan</i>	<i>Cold Spring Harbor Laboratory, New York (USA)</i>
13:00 - 14:00	<i>Lunch break</i>		
14:00 - 16:00	Membrane excitability, Ion channels and channelopathies	<i>Stephen Waxman</i>	<i>Center for Neuroscience and Regeneration Research, YALE University (USA)</i>
16:00 - 16:30	<i>Break</i>		
16:30 - 18:30	The cytoskeleton	<i>Peter Brophy</i>	<i>Centre for Neuroregeneration, University Edimburg (UK)</i>

Wednesday 23 Neurobiology

08:30 - 10:30	Axon degeneration and regeneration	<i>Ahmet Hoke</i>	<i>Neuromuscular Division, Johns Hopkins University (USA)</i>
10:30 - 11:00	<i>Break</i>		
11:00 - 13:00	Axonal trafficking	<i>Giampietro Schiavo</i>	<i>Molecular NeuroPathobiology Laboratory, UCL, London (UK)</i>

INTERNATIONAL MASTER
PERIPHERAL NERVOUS
SYSTEM DISORDERS
SCIENTIFIC PROGRAM

Director: GIUSEPPE LAURIA

Thursday 24 Neurobiology

09:00 - 11:00 Schwann cell and myelin-axon interactions *Carla Taveggia* *Institute of Experimental Neurology, San Raffaele Hospital, Milan*

11:00 - 11:30 *Break*

11:30 - 13:30 Node and paranode *Elior Peles* *Department of Molecular Cell Biology, Weizmann Institute (Israel)*

13:30 - 14:30 *Lunch*

14:30 - 16:30 Animal models in PNS biology and disease *Alessandra Bolino* *Institute of Experimental Neurology, San Raffaele Hospital, Milan*

Friday 25 Neurobiology

09:00 - 11:00 Mitochondrial genetics *Daniele Ghezzi* *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

11:00 - 11:30 *Break*

11:30 - 13:30 Axon sorting and development *Stefano Previtali* *Institute of Experimental Neurology, San Raffaele Hospital, Milan*

13:30 - 14:30 *Lunch*

14:30 - 16:30 iPSC models *Giacomo Comi* *University of Milan and Neurology Unit, IRCCS Foundation Ca' Granda, Ospedale Maggiore Policlinico*

MODULE 2

DIAGNOSTICS

March 18-22, 2019

Monday 18 Clinical Neurophysiology

08:30 - 10:00	Axon excitability and signal conduction	<i>Alberto Priori</i>	<i>University Milan</i>
10:00 - 11:30	Motor nerve conduction	<i>Antonio Uncini</i>	<i>University of Chieti</i>
11:30 - 12:00	<i>break</i>		
12:00 - 13:30	Sensory nerve conduction	<i>Fiore Manganelli</i>	<i>University of Naples</i>
13:30 - 14:30	<i>Lunch</i>		
14:30 - 15:30	Late responses; segmental and brainstem reflexes	<i>Rocco Quatrone</i>	<i>S. Angelo Hospital of Venice Mestre</i>
15:30 - 16:30	Needle EMG	<i>Roberto Eleopra</i>	<i>Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta</i>
16:30 - 17:00	<i>Break</i>		
17:00 - 18:30	Repetitive nerve stimulation and single fiber EMG	<i>Paolo Girlanda</i>	<i>University of Messina</i>
18:30 - 19:30	<i>LAB</i>		

Tuesday 19 Clinical Neurophysiology

09:00 - 11:00	Laryngeal EMG	<i>Enrico Alfonsi</i>	<i>IRCCS Mondino Institute of Pavia</i>
11:00 - 13:00	Pelvic EMG	<i>David Vodusek</i>	<i>University of Lubjana (SLO)</i>
13:00 - 14:30	<i>Lunch</i>		
14:30 - 15:30	Motor unit estimation techniques	<i>Christoph Neuwirth</i>	<i>Neuromuscular Diseases Unit, Kantonsspital St. Gallen (CH)</i>
15:30 - 16:30	Electrophysiologic signs of denervation and reinnervation	<i>Markus Weber</i>	<i>Neuromuscular Diseases Unit, Kantonsspital St. Gallen (CH)</i>
16:30 - 17:00	<i>Break</i>		
17:00 - 19:00	<i>LAB</i>		

Wednesday 20 Clinical Neurophysiology

08:30 - 09:45	Motor evoked potentials	<i>Angelo Quartarone</i>	<i>University of Messina</i>
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09:45 - 11:00	Somatosensory evoked potentials	<i>Vidmer Scaioli</i>	<i>Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta</i>
11:00 - 11:30	<i>Break</i>		
11:30 - 12:30	Visual evoked potentials	<i>Christian Lettieri</i>	<i>University Hospital of Udine</i>
12:30 - 13:30	Brainstem evoked potentials	<i>Grazia Devigili</i>	<i>Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta</i>
13:30 - 14:30	<i>Lunch</i>		
14:30 - 16:00	Pain-related evoked potential	<i>Massimiliano Valeriani</i>	<i>Dipartimento di Neuroscienze Ospedale Pediatrico Bambino Gesù, IRCCS, Roma</i>
16:00 - 17:00	Quantitative sensory testing	<i>Grazia Devigili</i>	<i>Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta</i>
17:00 - 17:15	<i>Break</i>		
17:14 - 19:00	Microneurography	<i>Jordi Serra</i>	<i>Department of Clinical Neurophysiology King's College Hospital, London</i>
Thursday 21 Clinical Neurophysiology			
08:30 - 10:00	Clinical approach	<i>Pietro Cortelli</i>	<i>Department of Neurology, University of Bologna and Ferrara</i>
10:00 - 11:30	Cardiovascular autonomic tests	<i>Valeria Tugnoli</i>	<i>Department of Neurology, University of Bologna and Ferrara</i>
11:30 - 12:00	<i>Break</i>		
12:00 - 13:30	Sudomotor, vasomotor, pupillary tests	<i>Grazia Devigili</i>	<i>Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta</i>
PM	<i>Social programme</i>		
Friday 22 Neuropathology and neuroimaging			
09:00 - 10:30	Nerve biopsy	<i>Tiziana Cavallaro</i>	<i>University-Hospital Verona</i>
10:30 - 11:00	<i>Break</i>		
11:00 - 12:30	Skin biopsy	<i>Giuseppe Lauria</i>	<i>Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta</i>
12:30 - 13:30	Corneal confocal microscopy	<i>Rayaz Malik</i>	<i>Internal Medicine and Endocrinology Unit, Cornell Qatar University, Doha (Qatar)</i>
13:30 - 14:30	<i>Lunch</i>		
14:30 - 16:30	Magnetic resonance imaging	<i>Roberto Gasparotti</i>	<i>Neuroradiology Unit, University of Brescia</i>
16:30 - 18:00	Ultrasonography	<i>Luca Padua</i>	<i>Neurorehabilitation Unit, Catholic University, Rome</i>

MODULE 2

PATHOPHYSIOLOGY, DIAGNOSIS, THERAPY, PROGNOSIS OF NEUROPATHIES

May 13-17, 2019

Monday 13 Metabolic and systemic disease-related neuropathies

09:00 - 11:00	Diabetes, deficiencies, infections, connective tissues diseases and	Angelo Schenone	University Genoa
11:30 - 13:00	Haematological and solid malignancies, paraneoplastic syndromes	Chiara Briani	Department of Neurology, University of Padova
13:00 - 14:30	Lunch		
14:30 - 16:00	Chemotherapy-related neuropathies Drug toxicity and poisoning	Guido Cavaletti	Experimental Neurology Unit, University Milan Bicocca
16:00 - 16:30	Break		

Amyloid-related neuropathies

16:30 - 18:00	Systemic amyloidosis	Giampaolo Merlini	Amyloidosis Research and Treatment Center, IRCCS Policlinico San Matteo
18:00 - 19:30	Inherited amyloidosis	Maria Saraiva	Instituto de Inovação e Investigação em Saúde, University of Porto (Portugal)

Tuesday 14 Immune-mediated neuropathies

09:00 - 11:00	Innate and adaptative immunity in PNS disorders	Hugh Willison	Institute of Infection, Immunity & Inflammation, University of Glasgow (UK)
11:00 - 13:00	GBS	Pieter van Doorn	Department of Neurology, University of Rotterdam (NL)
13:00 - 14:30	Lunch		
14:30 - 17:00	CIDP and MMN	Eduardo Nobile-Orazio	University of Milan/Humanitas
17:00 - 17:15	Break		
17:15 - 18:15	Sensory neuropathies and neuronopathies	Giuseppe Lauria	Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta
18:15 - 19:30	Clinical neurophysiology in immunomediated neuropathies facts and tricks	David Cornblath	Johns Hopkins University, Baltimore (USA)
	speakers dinner		

Wednesday 15 Functional assesment and rehabilitation

09:00 - 11:00	Sensory and neuromotor disorders	Luigi Tesio	University of Milan, IRCCS Istituto Auxologico Italiano, Milan
17:00 - 17:15	Break		
11:00 - 13:00	Modern clinimetrics: how to measure outcomes	Ingemar Merkies	Department of Neurology, St. Elisabeth Hospital (Curaçao)
PM	social programme		

Thursday 16 Inherited neuropathies

09:00 - 11:00	Axonal neuropathies	Mary Reilly	MRC Centre for Neuromuscular Diseases UC, National Hospital for Neurology and Neurosurgery, London (UK)
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11:00 - 13:00	Sensory and autonomic hereditary neuropathies	Matilde Laurà	<i>MRC Centre for Neuromuscular Diseases UC, National Hospital for Neurology and Neurosurgery, London (UK)</i>
13:00 - 14:30	Lunch		
14:30 - 17:00	Demyelinating neuropathies	Davide Pareyson	<i>Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta</i>
Friday 17 Traumatic injuries and nerve tumors / Rehabilitation			
09:00 - 11:30	Clinic and diagnostics, Neurosurgery and primary nerve tumors	Marco Sinisi	<i>Royal National Orthopaedic Hospital, London (UK)</i>
11:30 - 12:00	Break		
12:00 - 14:00	Nerve and limb traumatic injuries	Ernesta Magistroni	<i>Diagnostic Recovery and Functional Rehabilitation Unit, Orthopedic Traumatology Center, Torino</i>

MODULE 4

PAIN

November 11-15, 2019

Monday 11 Neuropathic pain

Pathogenesis and diagnostic approach Catharina Faber *Department of Neurology, University of Maastricht (NL)*

Break

Pain genetics Catharina Faber *Department of Neurology, University of Maastricht (NL)*

Lunch

Painful neuropathies Catharina Faber *Department of Neurology, University of Maastricht (NL)*

Break

Pain in Multiple Sclerosis Paolo Confalonieri *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

Tuesday 12 Neuropathic pain

Pain In Parkinson disease Roberto Eleopra *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

Break

Neuropathic pain: pharmacological treatments Grazia Devigili *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

Lunch

Neuromodulation and other surgical approaches Ivano Dones *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

Social programme

Wednesday 13 Brain plasticity

Body recognition Angelo Maravita *Milano Bicocca University, Milan*

Break

Neuroimaging Giandomenico Iannetti *Department of Neuroscience, Physiology and Pharmacology, UCL (UK)*

Lunch

Headaches and other cranial pain disorders

Migraines and tension type headache

Break

Cluster headache and other TACS

Massimo Leone

Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta

Thursday 14 Headaches and other cranial pain disorders

Migraine Chronification & Medication Overuse

Susanna Usai

Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta

Break

Innovative treatments: CGRP-related therapy

Massimo Leone

Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta

Lunch

Trigeminal neuralgia and other cranial neuralgias

Giuseppe Lauria

Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta

Break

Invasive neuromodulation

Alberto Proietti

Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta

Friday 15 Headaches and other cranial pain disorders

Non-pharmacological treatments and behavioral approaches

Licia Grazzi

Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta

Break

Cancer pain

Pain in cancer: diagnosis and treatments

Augusto Caraceni

IRCCS National Cancer Institute, Milan

Lunch

Palliative cares

Augusto Caraceni

IRCCS National Cancer Institute, Milan

Break

LAB

MODULE 5

PATHOPHYSIOLOGY, DIAGNOSIS, THERAPY, PROGNOSIS OF MOTOR NEURON AND NMJ DISEASES

January 20-24, 2020

Monday 20 Amyotrophic lateral sclerosis and related diseases

Epidemiology and genetics Adriano Chiò *University of Torino*

Pathophysiology and clinical features Vincenzo Silani *University of Milan*

Break

In vitro models Angelo Poletti *University of Milan*

In vivo models Caterina Bendotti *Mario Negri Pharmacological Institute, Milan*

Fragile function management Gabriele Mora *Maugeri Institute, Milan*

Lunch

Treatments and trials Giuseppe Lauria *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

Tuesday 21 Spinal muscular atrophy

Pathophysiology Giacomo Comi *University of Milan*

Clinical features Giovanni Baranello *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

Break

New treatments Giovanni Baranello *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

Neuromuscular junction diseases

Myasthenia Renato Mantegazza *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

Lunch

Eaton-Lambert syndrome Carlo Antozzi *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

Congenital myasthenia Lorenzo Maggi *Fondazione I.R.C.S.S. Istituto Neurologico Carlo Besta*

Wednesday 22 Practice at Besta Institute

Thursday 23 Practice at Besta Institute

Friday 24 Practice at Besta Institute