

**Wednesday, 13 October, 2021***Clinical*

12:00 - 13:00 CEST

R1

**Hot Topic 1: Disease progression: how to define, how to monitor***Chair:* Eva Kubala Havrdová, CZ*Chair:* Jelena Drulovic, RS

<b>Introduction by chairs</b>	12:00 - 12:05 CEST
<b>Clinical assessments and scores</b>	12:05 - 12:15 CEST
<i>Speaker:</i> Jeremy Hobart, GB	
<b>MRI techniques in routine practice</b>	12:15 - 12:25 CEST
<i>Speaker:</i> Christina Azevedo, US	
<b>OCT</b>	12:25 - 12:35 CEST
<i>Speaker:</i> Axel Petzold, GB	
<b>Live discussion</b>	12:35 - 13:00 CEST

*Clinical*

12:00 - 13:00 CEST

R2

**Hot Topic 2: COVID19 and MS***Chair:* Andrew Chan, CH*Chair:* Olaf Stuve, US

<b>Introduction by chairs</b>	12:00 - 12:05 CEST
<b>Immunology and virology</b>	12:05 - 12:15 CEST
<i>Speaker:</i> Renaud Du Pasquier, CH	
<b>Lessons learned from COVID19 &amp; MS registries and data gaps</b>	12:15 - 12:25 CEST
<i>Speaker:</i> Maria Pia Sormani, IT	
<b>Treatments in the context of MS: about DMT's and SARS-CoV2</b>	12:25 - 12:35 CEST
<i>Speaker:</i> Anat Achiron, IL	
<b>Live discussion</b>	12:35 - 13:00 CEST

*Pathogenesis*

12:00 - 13:00 CEST

R3

**European Charcot Foundation Symposium: The Mystery Solved Project: An MS Initiative of the ECF to foster research on human brain tissue***Chair:* Maria Pia Amato, IT*Chair:* Giancarlo Comi, IT

<b>The Mystery Solved Program: Aims and Current Status</b>	12:00 - 12:10 CEST
<i>Speaker:</i> Patrick Vanderdonck, BE	
<b>What have we learnt from brain biopsies from patients with early MS?</b>	12:10 - 12:25 CEST
<i>Speaker:</i> Claudia Lucchinetti, US	
<b>What can a Brain Bank contribute to MS research?</b>	

*Scientific program*

<i>Speaker:</i> Richard Reynolds, GB	12:25 - 12:40
<b>Live discussion</b>	12:40 - 13:00 CEST
<i>Speaker:</i> Hans Lassmann, AT	CEST
<i>Imaging and non-imaging biomarkers/Translational</i>	
12:00 - 13:00 CEST	R4
<b>Hot Topic 3: Imaging pathology in MS</b>	
<i>Chair:</i> Christian Enzinger, AT	
<i>Chair:</i> Kejal Kantarci, US	
<b>Introduction by chairs</b>	12:00 - 12:05 CEST
<b>Imaging of meninges and the glymphatic system</b>	12:05 - 12:15 CEST
<i>Speaker:</i> Daniel S. Reich, US	CEST
<b>The central vein sign and its diagnostic contribution to MS</b>	12:15 - 12:25 CEST
<i>Speaker:</i> Nikos Evangelou, GB	CEST
<b>Iron pathology on 7T-MRI: short-term effects vs long-term insights</b>	12:25 - 12:35 CEST
<i>Speaker:</i> Assunta Dal-Bianco, AT	
<b>Live discussion</b>	12:35 - 13:00 CEST
<i>Therapy / Global views</i>	
12:00 - 13:00 CEST	R5
<b>Hot Topic 4: Clinical relevance versus statistical significance – critical appraisal of MS research</b>	
<i>Chair:</i> Anne H. Cross, US	
<i>Chair:</i> Tobias Derfuss, CH	
<b>Introduction by chairs</b>	12:00 - 12:05 CEST
<b>How to assess and summarize a study</b>	12:05 - 12:15 CEST
<i>Speaker:</i> Elena Hernández Martínez-Lapiscina, ES	CEST
<b>The p-value – common misconceptions and correct application</b>	12:15 - 12:25 CEST
<i>Speaker:</i> Florian Deisenhammer, AT	CEST
<b>Data analyses: new strategies for new trial outcomes</b>	12:25 - 12:35 CEST
<i>Speaker:</i> Carmen Tur, ES	CEST
<b>Live discussion</b>	12:35 - 13:00 CEST
<i>Educational Sessions</i>	
12:00 - 13:00 CEST	R6
<b>Educational Session 1: MOGAD: differentiating from MS and AQP4 NMOSD</b>	
<i>Chair:</i> Jacqueline Palace, GB	
<i>Chair:</i> Brenda Banwell, US	
<b>Introduction by chairs</b>	12:00 - 12:05 CEST
<b>Clinical features and neuroimaging in MOGAD: Differentiation from MS and NMOSD</b>	12:05 - 12:20 CEST

*Speaker:* Jacqueline Palace, GB

**Application and limitation of MOG antibody assays**

12:20 - 12:35

*Speaker:* Fabienne Brilot, AU

CEST

**Treatment strategy and future outlook in MOGAD**

12:35 - 12:50

*Speaker:* Brenda Banwell, US

CEST

**Live discussion**

12:50 - 13:00

CEST

*Educational Sessions*

12:00 - 13:00 CEST

R7

**Educational Session 2: Treatment of relapsing-remitting MS**

*Chair:* Frauke Zipp, DE

*Chair:* Maria Trojano, IT

**Introduction by chairs**

12:00 - 12:05

CEST

**Should every relapsing MS patient be treated?**

12:05 - 12:20

*Speaker:* Jaume Sastre-Garriga, ES

CEST

**Switching treatments: when and how?**

12:20 - 12:35

*Speaker:* Frauke Zipp, DE

CEST

**Is there a place for induction treatment?**

12:35 - 12:50

*Speaker:* Maria Trojano, IT

CEST

**Live discussion**

12:50 - 13:00

CEST

*Nurses Sessions*

12:00 - 13:00 CEST

R8

**Nurses' Session 1 : Nursing role and competencies around the world and symptoms measure and management**

*Chair:* Miguel Angel Robles, ES

*Chair:* Therese Burke, AU

**Introduction by chairs**

12:00 - 12:05

CEST

**Conductors of Care: Exploring the skillset and definition of the MS Nurse role in Australasia**

12:05 - 12:20

*Speaker:* Therese Burke, AU

CEST

**Disease-related knowledge measurement instruments of people affected by multiple sclerosis: a systematic psychometric review**

12:20 - 12:35

*Speaker:* Marina Gonzalez, ES

CEST

**Title to be announced**

12:35 - 12:50

*Speaker:* Roberta Motta, IT

CEST

**Live discussion**

12:50 - 13:00

CEST

Scientific program

*Clinical*

13:15 - 14:45 CEST

R1

**Scientific Session 1: NMO spectrum and MOG antibody associated disorders: distinctions and overlaps**

*Chair:* Jacqueline Palace, GB

*Chair:* Friedemann Paul, DE

<b>Introduction by chairs</b>	13:15 - 13:20 CEST
<b>Pathology and antibodies</b>	13:20 - 13:35 CEST
<i>Speaker:</i> Romana Höftberger, AT	
<b>Clinical features and treatment responses</b>	13:35 - 13:50 CEST
<i>Speaker:</i> Dean M Wingerchuk, US	
<b>Platform presentations of related original papers</b>	13:50 - 13:50 CEST
<b>Revealing structural and clinical heterogeneity in the spectrum of neuromyelitis optica with unsupervised machine learning</b>	13:50 - 13:57 CEST
<i>Speaker:</i> Laura Cacciaguerra, IT	
<b>New T2 silent lesions in Myelin-Oligodendrocyte-Glycoprotein antibody disease and Aquaporin-4 antibody Neuromyelitis Optica Spectrum Disorders</b>	13:57 - 14:04 CEST
<i>Speaker:</i> Valentina Camera, IT	
<b>Significance of MOG antibodies in CSF: a retrospective multicenter study</b>	14:04 - 14:11 CEST
<i>Speaker:</i> Sara Carta, IT	
<b>Frequency, characteristics and outcomes of myelin oligodendrocyte glycoprotein-antibody-associated-disorder (MOGAD) and aquaporin-4 antibody positive neuromyelitis optica spectrum disorder (AQP4-NMOSD) attacks requiring ventilatory support</b>	14:11 - 14:18 CEST
<i>Speaker:</i> Hannah Zhao-Fleming, US	
<b>Live discussion</b>	14:18 - 14:45 CEST

*Pathogenesis*

13:15 - 14:45 CEST

R3

**Scientific Session 2: Blood-brain-barrier**

*Chair:* Inge Huitinga, NL

*Chair:* Hans Lassmann, AT

<b>Introduction by chairs</b>	13:15 - 13:20 CEST
<b>Mechanism of transmigration through the blood-brain-barrier</b>	13:20 - 13:35 CEST
<i>Speaker:</i> Alexandre Prat, CA	
<b>Lymphocyte migration across the blood-brain barrier</b>	13:35 - 13:50 CEST
<i>Speaker:</i> Britta Engelhardt, CH	
<b>Platform presentations of related original papers</b>	13:50 - 13:50 CEST
<b>Oxysterol-production by brain endothelial cells suppresses</b>	13:50 - 13:57

<b>Myeloid-Derived Suppressor Cells and promotes experimental autoimmune encephalomyelitis</b>	CEST
<i>Speaker:</i> Florian Ruiz, CH	
<b>Human induced pluripotent stem cell modeling of the blood-brain barrier identifies intrinsic barrier dysfunction in multiple sclerosis patients</b>	13:57 - 14:04 CEST
<i>Speaker:</i> Hideaki Nishihara, CH	
<b>Activated Tfh1 cells infiltrate the cerebrospinal fluid in early Multiple Sclerosis</b>	14:04 - 14:11 CEST
<i>Speaker:</i> Marion Mandon, FR	
<b>Blood-brain barrier permeability changes in multiple sclerosis during alemtuzumab treatment</b>	14:11 - 14:18 CEST
<i>Speaker:</i> Maria Højberg Knudsen, DK	
<b>Live discussion</b>	14:18 - 14:45 CEST
<i>Imaging and non-imaging biomarkers/Translational</i> 13:15 - 14:45 CEST	R4
<b>Scientific Session 3: Molecular imaging</b>	
<i>Chair:</i> Olga Ciccarelli, GB	
<i>Chair:</i> Bruno Stankoff, FR	
<b>Introduction by chairs</b>	13:15 - 13:20 CEST
<b>Molecular imaging of myelin</b>	13:20 - 13:35 CEST
<i>Speaker:</i> Russell Ouellette, SE	
<b>Recent advances in immunological imaging</b>	13:35 - 13:50 CEST
<i>Speaker:</i> Benedetta Bodini, FR	
<b>Platform presentations of related original papers</b>	13:50 - 13:50 CEST
<b>Slowly expanding lesion burden and microstructural damage are associated with a higher risk of long-term disability progression in multiple sclerosis: a 9-year longitudinal study</b>	13:50 - 13:57 CEST
<i>Speaker:</i> Paolo Preziosa, IT	
<b>Changes in brain metabolites in participants with RMS and PPMS treated with Ocrelizumab for 1 year.</b>	13:57 - 14:04 CEST
<i>Speaker:</i> Bretta Russell-Schulz, CA	
<b><sup>11</sup>C-PBR28 MR-PET reveals in vivo inflammatory signal changes in meningeal brain tissue in multiple sclerosis</b>	14:04 - 14:11 CEST
<i>Speaker:</i> Elena Herranz, US	
<b>Correlation of six myelin-sensitive quantitative MRI measures with myelin histology in white matter lesions and normal-appearing white matter in MS</b>	14:11 - 14:18 CEST
<i>Speaker:</i> Riccardo Galbusera, CH	
<b>Live discussion</b>	14:18 - 14:45 CEST

*Scientific program**Therapy / Global views*

13:15 - 14:45 CEST

R5

**Scientific Session 4: Real world evidence data and MS registries***Chair:* Dana Horakova, CZ*Chair:* Maria Trojano, IT

<b>Introduction by chairs</b>	13:15 - 13:20 CEST
<b>The power of big data to improve MS management</b>	13:20 - 13:35 CEST
<i>Speaker:</i> Jan Hillert, SE	
<b>Multinational registries: opportunities and pitfalls</b>	13:35 - 13:50 CEST
<i>Speaker:</i> Helmut Butzkueven, AU	
<b>Platform presentations of related original papers</b>	13:50 - 13:50 CEST
<b>Effectiveness of initial MS Treatments in the COMBAT-MS Trial: Injectables, Dimethyl Fumarate, Natalizumab, and Rituximab</b>	13:50 - 13:57 CEST
<i>Speaker:</i> Peter Alping, SE	
<b>Improving the decision to switch from first to second-line therapy in MS: a dynamic scoring system</b>	13:57 - 14:04 CEST
<i>Speaker:</i> Camille Sabathé, FR	
<b>The disease-modifying drugs for multiple sclerosis and subsequent health service use: a population-based study</b>	14:04 - 14:11 CEST
<i>Speaker:</i> Huah Shin Ng, CA	
<b>Relapse-associated worsening and progression independent of relapse activity in an Italian multicentre cohort of early multiple sclerosis patients</b>	14:11 - 14:18 CEST
<i>Speaker:</i> Mattia Fonderico, IT	
<b>Live discussion</b>	14:18 - 14:45 CEST

*Educational Sessions*

13:15 - 14:15 CEST

R6

**Educational Session 3: Treatment of progressive MS***Chair:* Xavier Montalban, ES*Chair:* Jeremy Chataway, GB

<b>Introduction by chairs</b>	13:15 - 13:20 CEST
<b>Which progressive patient should be treated?</b>	13:20 - 13:35 CEST
<i>Speaker:</i> Xavier Montalban, ES	
<b>How to monitor treatment responses in progressive patients?</b>	13:35 - 13:50 CEST
<i>Speaker:</i> Daniel Ontaneda, US	
<b>Future treatment options for progressive MS</b>	13:50 - 14:05 CEST
<i>Speaker:</i> Jeremy Chataway, GB	
<b>Live discussion</b>	14:05 - 14:15 CEST

*Scientific program**Educational Sessions*

13:15 - 14:15 CEST

R7

**Educational Session 4: Diagnosis of MS***Chair:* Georgina Arrambide, ES*Chair:* Johannes Lorscheider, CH**Introduction by chairs**

13:15 - 13:20

CEST

**The MS diagnostic criteria in clinical practice**

13:20 - 13:35

*Speaker:* Georgina Arrambide, ES

CEST

**When does progression start?**

13:35 - 13:50

*Speaker:* Johannes Lorscheider, CH

CEST

**Red flags and extreme presentation of MS**

13:50 - 14:05

*Speaker:* Pierre Labauge, FR

CEST

**Live discussion**

14:05 - 14:15

CEST

*Nurses Sessions*

13:15 - 14:15 CEST

R8

**Nurses' Session 2: Quality of life and new approaches in the MS field***Chair:* Francesco Pastore, IT*Chair:* Megan Weigel, US**Introduction by chairs**

13:15 - 13:20

CEST

**Title to be announced**

13:20 - 13:35

CEST

**Nursing digital care during covid19 outbreak: the experience of multiple sclerosis centre in southern Italy**

13:35 - 13:50

*Speaker:* Francesco Pastore, IT

CEST

**The Value of Integrative Medicine Modalities and Quality of Life Measures in MS: A Pilot Program**

13:50 - 14:05

*Speaker:* Megan Weigel, US

CEST

**Live discussion**

14:05 - 14:15

CEST

*Plenary Sessions*

14:45 - 16:00 CEST

R2

**Time to visit the exhibition and to network with colleagues***Satellite Symposium*

15:00 - 16:00 CEST

R1

**Satellite Symposium 1***Satellite Symposium*

15:00 - 16:00 CEST

R2

**Satellite Symposium 2**

Plenary Sessions

16:15 - 16:45 CEST

R1

**Plenary Session 1: Welcome Addresses andECTRIMS Lecture**

*Chair:* Maria Pia Amato, IT

*Chair:* Mar Tintoré, ES

*Chair:* Thomas Berger, AT

**Welcome toECTRIMS 2021**

16:15 - 16:20

*Speaker:* Thomas Berger, AT

CEST

*Speaker:* Maria Pia Amato, IT

**ECTRIMS Lecture: Gains by translation: from basic neuroimmunology to disease modifying therapies**

16:20 - 16:45

*Speaker:* Roland Martin, CH

CEST

Poster Session

16:45 - 18:45 CEST

R1

**Poster Viewing 1**

Poster Session

16:45 - 18:45 CEST

**eP15 - ePoster - Neuro-ophthalmology**

- |      |  |        |
|------|--|--------|
| P282 | <b>Are eye movements and brain networks connected in multiple sclerosis?</b><br><i>Speaker:</i> J.A. Nij Bijvank, NL   | - CEST |
| P283 | <b>The effect of time to initiation and dose of methylprednisolone on outcome in optic neuritis</b><br><i>Speaker:</i> Daniel Golan, IL                              | - CEST |
| P284 | <b>Primary Progressive Optic Neuropathy may cause Early Bilateral Visual Failure in Multiple Sclerosis</b><br><i>Speaker:</i> Iris Kleerekooper, GB                  | - CEST |
| P285 | <b>Lateral geniculate nucleus: the “pit stop” of anterograde trans-synaptic degeneration in very early RRMS.</b><br><i>Speaker:</i> Silvia Miante, IT                | - CEST |
| P286 | <b>Longitudinal changes of the inner nuclear layer in multiple sclerosis: a marker for burn out of retinal inflammation?</b><br><i>Speaker:</i> J.A. Nij Bijvank, NL | - CEST |
| P287 | <b>Prevalence of internuclear ophthalmoplegia in a population-based cohort of patients with multiple sclerosis</b><br><i>Speaker:</i> J.A. Nij Bijvank, NL           | - CEST |
| P288 | <b>Reliability of mobile video oculography in a prospective cohort of MS patients</b><br><i>Speaker:</i> Mikael Cohen, FR  | - CEST |

Poster Session

16:45 - 18:45 CEST

**ep02 - ePoster - NMOSD**



## Scientific program

P023	<b>Long-term safety of satralizumab in neuromyelitis optica spectrum disorder: Results from the open-label extension periods of SAKuraSky and SAKuraStar</b> <i>Speaker:</i> Benjamin M. Greenberg, US	- CEST
P024	<b>Long-term efficacy of satralizumab in aquaporin-4-IgG-seropositive neuromyelitis optica spectrum disorder (NMOSD): Results from the open-label extension periods of SAKuraSky and SAKuraStar</b> <i>Speaker:</i> Ingo Kleiter, DE	- CEST
P025	<b>Early predictors of disability of paediatric-onset AQP4-IgG seropositive Neuromyelitis Optica Spectrum Disorders</b> <i>Speaker:</i> Valentina Camera, IT	- CEST
P026	<b>Impact of a single relapse on disability and health-related quality of life in neuromyelitis optica spectrum disorder</b> <i>Speaker:</i> Achim Berthele, DE	- CEST
P027	<b>Disease outcomes in the absence of a relapse in patients with neuromyelitis optica spectrum disorder</b> <i>Speaker:</i> Adrian Kielhorn, US	- CEST
P028	<b>Extent of B-cell depletion is associated with disease activity reduction in neuromyelitis optica spectrum disorder: results from the N-MOMentum study</b> <i>Speaker:</i> Jeffrey Bennett, US	- CEST
P029	<b>The impact of low affinity immunoglobulin gamma Fc region receptor III-A gene polymorphisms in neuromyelitis optica spectrum disorder and implications for treatment outcomes: results from the N-MOMentum study</b> <i>Speaker:</i> Jeffrey Bennett, US	- CEST
P030	<b>Novel disability assessment of neuromyelitis optica spectrum disorders derived from the CIRCLES experience</b> <i>Speaker:</i> Alex Exuzides, US	- CEST
P031	<b>Novel assessment of disability vs cognition and pain in neuromyelitis optica spectrum disorders: a CIRCLES cohort study</b> <i>Speaker:</i> Shervin Gholizadeh, US	- CEST
P032	<b>COVID-19 in Neuromyelitis Optica Spectrum Disorders and Myelin Oligodendrocyte Glycoprotein Antibody Disease Patients in North America; COViMS Registry</b> <i>Speaker:</i> Scott D Newsome, US	- CEST
P033	<b>Aquaporin-4 and Myelin Oligodendrocyte Glycoprotein Antibody Testing in Calgary, Canada: A Quality Improvement Review</b> <i>Speaker:</i> Jonathan D. Krett, CA	- CEST
P034	<b>Brain and spinal cord lesion criteria on conventional MRI for differentiating MS from NMOSD and MOGAD in a large multi-</b>	- CEST

	<b>ethnic cohort and in different onset phenotypes</b>	
	<i>Speaker:</i> Edgar Carnero Contentti, AR	
P035	<b>Disability outcomes during follow-up in NMOSD and MOGAD patients: data from a nationwide registry in Argentina</b>	- CEST
	<i>Speaker:</i> Juan Ignacio Rojas, AR	
P036	<b>COVID-19 in neuromyelitis optica spectrum disorder patients in Poland</b>	- CEST
	<i>Speaker:</i> Aleksandra Podlecka-Pietowska, PL	
P037	<b>Safety and efficacy of inebilizumab in NMOSD over a mean treatment duration of 3.2 years: end of study data from the N-MOMentum trial</b>	- CEST
	<i>Speaker:</i> Bruce Cree, US	
P038	<b>Exploring steroid tapering in NMOSD patients treated with satralizumab in the open-label extension period of SAKuraSky: a case series</b>	- CEST
	<i>Speaker:</i> Takashi Yamamura, JP	
P039	<b>SAkuraBONSAI: A prospective, open-label study of satralizumab investigating novel imaging, biomarker, and clinical outcomes in patients with AQP4-IgG seropositive NMOSD</b>	- CEST
	<i>Speaker:</i> Jeffrey Bennett, US	
P040	<b>Cognitive Function in Patients with Neuromyelitis Optica Spectrum Disorders and Myelin Oligodendrocytic Glycoprotein-Antibody Associated Disease</b>	- CEST
	<i>Speaker:</i> Pia Sophie Sperber, DE	
P041	<b>Comparing healthcare resource utilization and costs of active and inactive periods in NMOSD</b>	- CEST
	<i>Speaker:</i> Rachel Knapp, DE	
P042	<b>Safety of the COVID-19 vaccines in NMOSD and MOGAD: Results from an online survey</b>	- CEST
	<i>Speaker:</i> Itay Lotan, IL	
P043	<b>A Canadian national case control study into demographic and environmental risk factors for NMOSD</b>	- CEST
	<i>Speaker:</i> Dalia L. Rotstein, CA	
P044	<b>Patients with neuromyelitis optica spectrum disorder display hallmarks of systemic autoimmunity: broad serum autoreactivity to nuclear antigens and elevated interferon-inducible gene expression</b>	- CEST
	<i>Speaker:</i> Sean Pittock, US	
P045	<b>Evaluating the economic and healthcare resource burden posed by NMOSD</b>	- CEST
	<i>Speaker:</i> Rachel Knapp, DE	
P046	<b>The Impact Of COVID19 Pandemic On NeuromyelitisOptica</b>	- CEST

	<b>Spectrum Disorder Patients In Isfahan, Iran , After one Year Of Epidemic.</b>	
	<i>Speaker:</i> Roshanak Mehdipour, IR	
P047	<b>Subtherapeutic response in NMOSD: data from a nationwide registry in Argentina</b>	- CEST
	<i>Speaker:</i> Juan Ignacio Rojas, AR	
P048	<b>Association between BMI and disability in Korean patients with multiple sclerosis and neuromyelitis optica spectrum disorder</b>	- CEST
	<i>Speaker:</i> Yeon Hak Chung, KR	
P049	<b>Using cognitive interviews to develop a conceptual claims-based algorithm to identify patients with neuromyelitis optica spectrum disorder</b>	- CEST
	<i>Speaker:</i> Alex Exuzides, US	
P050	<b>A survey-based study of the impact of the COVID-19 pandemic in patient with Neuromyelitis Optica Spectrum Disorder</b>	- CEST
	<i>Speaker:</i> Carolyn Goldschmidt, US	
P051	<b>The association between body mass index and cognitive function in patients with neuromyelitis optica spectrum disorder</b>	- CEST
	<i>Speaker:</i> Nasim Rezaeimanesh, IR	
P052	<b>CLINICAL EVOLUTION OF PATIENTS WITH NEUROMYELITIS OPTICA WHEN COMPARING MANAGEMENT WITH AZATHIOPRINE OR RITUXIMAB IN A COLOMBIAN COHORT</b>	- CEST
	<i>Speaker:</i> Maria Zuluaga, CO	

*Poster Session*

16:45 - 18:45 CEST

**eP07 - ePoster - Natural Course**

P125	<b>Risk Factors of Early Clinical Conversion in Radiologically Isolated Syndrome</b>	- CEST
	<i>Speaker:</i> Christine Lebrun-Frenay, FR	
P126	<b>Changes in the epidemiology and prognosis of the Danish multiple sclerosis population</b>	- CEST
	<i>Speaker:</i> Melinda Magyari, DK	
P127	<b>Longitudinal profiling of early NFL and MRI prognostic biomarkers against 15-year outcomes in relapse-onset multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Thomas Williams, GB	
P128	<b>Overcoming COVID-19 vaccine hesitancy in people with multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Alon Kalron, IL	

*Poster Session*

16:45 - 18:45 CEST

**eP33 - ePoster - Long-term treatment monitoring**

P722	<b>Early Treatment With Alemtuzumab Maintains Its Efficacy on Clinical and MRI Disease Activity Outcomes, Including Slowing of Brain Volume Loss, Over 10 Years in RRMS Patients: CARE-MS II Follow-up (TOPAZ Study)</b> <i>Speaker:</i> Gavin Giovannoni, GB	- CEST
P723	<b>Long-term reduction of relapse rate and confirmed disability progression after 7.5 years of ocrelizumab treatment in patients with relapsing multiple sclerosis in the OPERA OLE</b> <i>Speaker:</i> Gavin Giovannoni, GB	- CEST
P724	<b>Safety of ocrelizumab in multiple sclerosis: updated analysis in patients with relapsing and primary progressive multiple sclerosis</b> <i>Speaker:</i> Stephen Hauser, US	- CEST
P725	<b>Hepatic safety of ozanimod in relapsing multiple sclerosis in the DAYBREAK open-label extension study</b> <i>Speaker:</i> Krzysztof Selmaj, PL	- CEST
P726	<b>Long-term effect of fingolimod on cardiovascular functioning in people with relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Rocco Haase, DE	- CEST
P727	<b>Safety profile characterisation of evobrutinib in over 1000 patients from phase II clinical trials in multiple sclerosis, rheumatoid arthritis and systemic lupus erythematosus</b> <i>Speaker:</i> Xavier Montalban, ES	- CEST
P728	<b>The influence of disease modifying therapies on immunoglobulin blood levels in patients with multiple sclerosis</b> <i>Speaker:</i> Ana-Katharina Klein, DE	- CEST
P729	<b>The Impact of Ocrelizumab on Immunoglobulin Levels and the Risk of Infection.</b> <i>Speaker:</i> Kyle Smoot, US	- CEST
P730	<b>Efficacy of highly active disease modifying treatment versus interferon in multiple sclerosis: a UK MS register study</b> <i>Speaker:</i> William Rodgers, GB	- CEST
P731	<b>Clinical Effectiveness and Safety of Teriflunomide for Patients Treated at least 48 Months in the Swedish post-market surveillance study “Immunomodulation and Multiple Sclerosis Epidemiology 4” (IMSE 4)</b> <i>Speaker:</i> Victoria Rosengren, SE	- CEST
P732	<b>Ten years of fingolimod in multiple sclerosis: who will benefit from it? Insights from a large real-world cohort study.</b> <i>Speaker:</i> Lucas Gauer, FR	- CEST
P733	<b>Alemtuzumab Maintains Efficacy on Clinical and MRI Disease Activity Outcomes, Including Slowing of Brain Volume Loss, Over 10 Years in RRMS Patients: CARE-MS I Follow-up (TOPAZ Study)</b>	- CEST

	<i>Speaker:</i> Alasdair Coles, GB	
P734	<b>The effect of alemtuzumab treatment in relapsing remitting multiple sclerosis: real-world data from a five-year prospective one center study</b> <i>Speaker:</i> Sofia Sandgren, SE	- CEST
P735	<b>Clinical Effectiveness and Safety of Dimethyl Fumarate for Patients Treated at least 5 Years in the Swedish post-market surveillance study “Immunomodulation and Multiple Sclerosis Epidemiology 5” (IMSE 5)</b> <i>Speaker:</i> Victoria Rosengren, SE	- CEST
P736	<b>A Swedish Nationwide Pharmaco-Epidemiological Study of the Long-Term Safety and Effectiveness of Alemtuzumab (IMSE 3)</b> <i>Speaker:</i> Edit Ekström, SE	- CEST
P737	<b>Long-term safety and efficacy of ozanimod in relapsing multiple sclerosis: interim analysis of the DAYBREAK open-label extension study</b> <i>Speaker:</i> Krzysztof Selmaj, PL	- CEST
P738	<b>The Long-Term Safety and Effectiveness of Natalizumab (IMSE 1) - Real-world data from a Swedish Nationwide Pharmaco-Epidemiological Study</b> <i>Speaker:</i> Edit Ekström, SE	- CEST
P739	<b>Diroximel Fumarate in Patients with Relapsing-Remitting Multiple Sclerosis: Interim Safety and Efficacy Results from the Phase 3 EVOLVE-MS-1 Study</b> <i>Speaker:</i> Sibyl E. Wray, US	- CEST
P740	<b>Utilization, safety, and tolerability of ocrelizumab: year 4 data from the Providence Ocrelizumab Registry</b> <i>Speaker:</i> Kyle Smoot, US	- CEST
P741	<b>High Adherence to Treatment With Cladribine Tablets for Multiple Sclerosis During the COVID-19 Pandemic: Results from Patient Support Programmes</b> <i>Speaker:</i> Jiwon Oh, CA	- CEST
P742	<b>Disease-Modifying Treatment Patterns of Patients With Multiple Sclerosis and Newly Treated With Cladribine Tablets or Fingolimod: An Interim Analysis of the CLARION Study</b> <i>Speaker:</i> Helmut Butzkueven, AU	- CEST
P743	<b>Clinical Effectiveness and Safety of Cladribine Tablets for Patients Treated at least 12 Months in the Swedish post-market surveillance study “Immunomodulation and Multiple Sclerosis Epidemiology 10” (IMSE 10)</b> <i>Speaker:</i> Victoria Rosengren, SE	- CEST
P744	<b>Reconstitution of Lymphocytes following discontinuation of Dimethyl fumarate (DMF) due to Lymphopenia in the Swedish post-market surveillance study “Immunomodulation and Multiple Sclerosis Epidemiology 5” (IMSE 5)</b>	- CEST

	<i>Speaker:</i> Victoria Rosengren, SE	
P745	<b>Estimating long-term effect of siponimod on disability progression versus virtual placebo in SPMS using RPSFT model: EXPAND data up to 7 years</b> <i>Speaker:</i> Bruce A Cree, US	- CEST
P746	<b>LONG-TERM IMMUNE-RELATED ADVERSE EVENTS AFTER ALEMTUZUMAB</b> <i>Speaker:</i> Rocío López Ruiz, ES	- CEST
P747	<b>Hypogammaglobulinemia and infection rates in ocrelizumab treated multiple sclerosis patients over 3 years: A real-world single center study</b> <i>Speaker:</i> Bhupendra O Khatri, US	- CEST
P748	<b>Real-world longitudinal data of peginterferon beta-1a from the Swedish national post-marketing surveillance study (IMSE 6) – effectiveness and safety profile</b> <i>Speaker:</i> Edit Ekström, SE	- CEST
P749	<b>Blumetq data : EDSS scores in patients on Disease Modifying Therapy at a single centre</b> <i>Speaker:</i> Rachel Dorsey-Campbell, GB	- CEST
P750	<b>Safety of B cell depleting effects of ocrelizumab in patients with multiple sclerosis in clinical practice</b> <i>Speaker:</i> Rami Al-Hader, US	- CEST
P751	<b>DISContinuation of disease-modifying therapies in MS (DISCOMS) Extension – Study Design and Baseline Demographics</b> <i>Speaker:</i> John Corboy, US	- CEST
P752	<b>Long-term outcome and predictors of long-term disease activity in Natalizumab treated patients with multiple sclerosis – real life data from the Austrian MS Treatment Registry</b> <i>Speaker:</i> Michael Guger, AT	- CEST
P753	<b>COVID-19 in patients with aggressive MS treated with aHSCT: a multi-center study</b> <i>Speaker:</i> Elvira Sbragia, IT	- CEST
P754	<b>REAL WORLD DATA ON THE USE OF OCRELIZUMAB. INCIDENCE OF LYMPHOPENIA, B-CELL AND IMMUNOGLOBULINS EVOLUTION</b> <i>Speaker:</i> Rocío López Ruiz, ES	- CEST
P755	<b>Comparative effectiveness of beta-nterferons and glatramer acetate on physcal and cogntve functons: 6-month follow-up study</b> <i>Speaker:</i> Taha Aslan, TR	- CEST

## Poster Session

16:45 - 18:45 CEST

**eP31 - ePoster - Immunomodulation/Immunosuppression**

P626	<b>Effect of disease modifying therapies on progressive multiple sclerosis: a meta-analysis of randomized clinical trials</b> <i>Speaker:</i> Mirko Capanna, IT	- CEST
P627	<b>Efficacy and safety of ocrelizumab in patients with RRMS with suboptimal response to prior disease-modifying therapies: 3-year data from CASTING and LIBERTO 1-year interim results????</b> <i>Speaker:</i> Bart Van Wijmeersch, BE	- CEST
P628	<b>Recently diagnosed early-stage RRMS: NEDA, ARR, disability progression, serum neurofilament and safety: full cohort 1-year data from the ocrelizumab Phase IIIb ENSEMBLE study</b> <i>Speaker:</i> Hans-Peter Hartung, DE	- CEST
P629	<b>Incomplete depletion of B-cells after induction therapy with ocrelizumab in MS</b> <i>Speaker:</i> Alexander Wuschek, DE	- CEST
P630	<b>Disease-modifying therapy effect on COVID-19 vaccine response in multiple sclerosis patients: data from two New York State Multiple Sclerosis Consortium centers</b> <i>Speaker:</i> Bianca Weinstock-Guttman, US	- CEST
P631	<b>Up to 6 years follow-up of people with MS (n=250) receiving cladribine</b> <i>Speaker:</i> Kimberley Allen-Philbey, GB	- CEST
P632	<b>Impact of the COVID-19 pandemic on disease-modifying therapy utilization and perceptions in multiple sclerosis: a retrospective insurance claims analysis and survey study of people with MS and healthcare providers.</b> <i>Speaker:</i> Ethan Meltzer, US	- CEST
P633	<b>Multiparametric phenotyping of immune cell dynamics under ocrelizumab: a one-year longitudinal study in MS patients</b> <i>Speaker:</i> Amandine Mathias, CH	- CEST
P634	<b>International Multicenter Retrospective Study Suggests Maintenance Intravenous Immunoglobulin is Effective in Preventing Relapse in Adults with Myelin Oligodendrocyte Glycoprotein Antibody Associated Disorder</b> <i>Speaker:</i> John Chen, US	- CEST
P635	<b>Low dose Interleukin-2 in Relapsing-Remitting Multiple Sclerosis: A Randomized Double-Blinded Placebo-Controlled Trial</b> <i>Speaker:</i> Celine Louapre, FR	- CEST
P636	<b>Retained efficacy with extended Rituximab dosing intervals in Relapsing-Remitting Multiple Sclerosis: a Swedish single-centre observational study.</b>	- CEST

	<i>Speaker:</i> Chiara Starvaggi Cucuzza, SE	
P637	<b>Analyses of the Effect of Baseline Age on the Efficacy and Safety of Siponimod in Patients with Active Secondary Progressive Multiple Sclerosis from the EXPAND Study</b> <i>Speaker:</i> Le H. Hua, US	- CEST
P638	<b>Updated open-label extension clinical data and new magnetization transfer ratio imaging data from a Phase I study of ATA188, an off-the-shelf, allogeneic Epstein-Barr virus-targeted T-cell immunotherapy for progressive multiple sclerosis</b> <i>Speaker:</i> Amit Bar-Or, US	- CEST
P639	<b>Clinical Impact of Delaying Ocrelizumab Infusions During the SARS-COV-2 Pandemic.</b> <i>Speaker:</i> Kyle Smoot, US	- CEST
P640	<b>Anti-CD20 Therapies Are Associated with Decreased Seropositivity In Patients with Multiple Sclerosis and Related Diseases: One-Year Pandemic Experience of the <u>New York C OVID-19 Neuroimmunology Consortium (NYCNIC)</u></b> <i>Speaker:</i> Sylvia Klineova, US	- CEST
P641	<b>Pregnancy and infant outcomes in women receiving ocrelizumab for the treatment of multiple sclerosis</b> <i>Speaker:</i> Ruth Dobson, GB	- CEST
P642	<b>Oral Delivery of Non-live Preparation of <i>Veillonella parvula</i> Modulates CNS Inflammation via the Small Intestinal Axis: a Novel Approach to Treating Neuroinflammatory Diseases</b> <i>Speaker:</i> Holly E. Ponichtera, US	- CEST
P643	<b>BTK inhibition results in reduction of pro-inflammatory human B-cell responses both in <i>vitro</i> and in <i>vivo</i></b> <i>Speaker:</i> Rui Li, US	- CEST
P644	<b>Comprehensive profiling of ATA188, an off-the-shelf, allogeneic Epstein-Barr virus-specific T-cell immunotherapy for progressive multiple sclerosis</b> <i>Speaker:</i> Monica Moreno, US	- CEST
P645	<b>Safety and tolerability of IMU-838, a next-generation DHODH inhibitor in EMPHASIS: a randomized, placebo-controlled phase 2 trial in relapsing multiple sclerosis</b> <i>Speaker:</i> Robert J. Fox, US	- CEST
P646	<b>A short pause in ponesimod treatment completely restores the ability to mount post-vaccination antibody titers in mice</b> <i>Speaker:</i> Krista Spiller, US	- CEST
P647	<b>Comparison of multiple disease modifying therapies in multiple sclerosis with marginal structural models</b> <i>Speaker:</i> Ibrahima Diouf, AU	- CEST
P648	<b>Real-world efficacy data of azathioprine in AQP4-IgG</b>	- CEST



	<b>seropositive neuromyelitis optica spectrum disorder</b>	
	<i>Speaker:</i> Rasha Saleem, DK	
P649	<b>Humoral immune response to the influenza vaccine in multiple sclerosis patients treated with cladribine or rituximab</b>	- CEST
	<i>Speaker:</i> Åslaug Rudjord Lorentzen, NO	
P650	<b>Humoral and cellular immune responses to SARS-CoV-2 mRNA vaccination in patients with multiple sclerosis treated with high-efficacy disease-modifying therapies</b>	- CEST
	<i>Speaker:</i> Marton König, NO	
P651	<b>Humoral response to SARS-CoV-2-mRNA vaccine in Multiple Sclerosis patients treated with high efficacy disease-modifying therapies</b>	- CEST
	<i>Speaker:</i> Rocco Capuano, ES	
P652	<b>IgG immune response to SARS-CoV-2 vaccination in people living with multiple sclerosis within MS PATHS</b>	- CEST
	<i>Speaker:</i> Jeffrey Cohen, US	
P653	<b>Treatment of multiple sclerosis with Rituximab: A multicenter Spanish experience.</b>	- CEST
	<i>Speaker:</i> Carmen Alcalá, ES	
P654	<b>Demographic Features and Clinical Course of Pediatric-Onset MS Patients on Newer Disease-Modifying Treatments</b>	- CEST
	<i>Speaker:</i> Nikita Shukla, US	
P655	<b>Rationale and design of a Phase 4 study exploring B-cell levels and immune responses in infants born to women with MS who were exposed to ocrelizumab up to 6 months before or during the first trimester of pregnancy (the MINORE study)</b>	- CEST
	<i>Speaker:</i> Kerstin Hellwig, DE	
P656	<b>The role of human and mouse BTK in myeloid cells</b>	- CEST
	<i>Speaker:</i> Cinthia Farina, IT	
P657	<b>The effects of culture-expanded, non-cryopreserved adipose tissue mesenchymal stem cells on neurological and immunological paradigms in female patients with secondary progressive multiple sclerosis: A phase I/II clinical trial</b>	- CEST
	<i>Speaker:</i> Fahimeh Lavi, IR	
P658	<b>Comparative analysis of early treatment effectiveness of first-line disease-modifying therapies and fingolimod on cognitive functions in persons with multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Pinar Yigit, TR	
P659	<b>Effect of ozanimod on circulating leukocyte subtypes in patients with relapsing multiple sclerosis and comparison with healthy volunteers</b>	- CEST
	<i>Speaker:</i> Sarah Harris, US	
P660	<b>Tracking the immune response to SARS-CoV-2 mRNA vaccines</b>	- CEST

	<b>in an open-label multicenter study in participants with relapsing multiple sclerosis treated with ofatumumab s.c. (KYRIOS clinical trial)</b>	
	<i>Speaker:</i> Tjalf Ziemssen, DE	
P661	<b>Disease activity in multiple sclerosis patients switching from fingolimod to cladribine compared to rituximab</b>	- CEST
	<i>Speaker:</i> Gro Owren Nygaard, NO	
P662	<b>Personalized extended interval dosing of natalizumab in relapsing remitting multiple sclerosis – a prospective multicenter trial in The Netherlands</b>	- CEST
	<i>Speaker:</i> A.A. Toorop, NL	
P663	<b>Comparison of pharmacokinetic profiles and safety outcomes with peginterferon beta-1a administration in Black/African American and White participants</b>	- CEST
	<i>Speaker:</i> Yuan Zhao, US	
P664	<b>Alemtuzumab-related lymphocytes subset dynamics and disease activity or autoimmune adverse event</b>	- CEST
	<i>Speaker:</i> Signoriello Elisabetta, IT	
P665	<b>A Retrospective Review of Covid Spike Protein Antibody Development following Covid-19 Vaccination in MS Patients on Disease Modifying Drugs</b>	- CEST
	<i>Speaker:</i> Asya Wallach, US	
P666	<b>MRI Outcomes From the Long-term Extension Study of Tolebrutinib in Relapsing MS: Year 1 Results????</b>	- CEST
	<i>Speaker:</i> Daniel S. Reich, US	
P667	<b>Safety and Efficacy Outcomes From the Long-term Extension Study of Tolebrutinib in Patients With Relapsing MS: Year 1 Results</b>	- CEST
	<i>Speaker:</i> Jiwon Oh, CA	
P668	<b>Factors Associated with Dimethyl Fumarate induced lymphopenia in a rural Multiple Sclerosis Cohort</b>	- CEST
	<i>Speaker:</i> Muhammad Taimur Malik, US	
P669	<b>SAFETY AND EFFICACY DATA FROM SATEEN TRIAL IN MULTIPLE SCLEROSIS</b>	- CEST
	<i>Speaker:</i> Jordi Xaus, ES	
P670	<b>The role of ADAM28 in the immune interactions of mesenchymal stem cells in Multiple Sclerosis patients</b>	- CEST
	<i>Speaker:</i> Nanci Frakich, GB	
P671	<b>Humoral Response to SARS-CoV-2 Natural Infection and mRNA vaccines among Patients with Multiple Sclerosis</b>	- CEST
	<i>Speaker:</i> Matthew Tremblay, US	
P672	<b>Safety and Tolerability of Conversion to Siponimod With and Without Titration in Patients with Advancing Forms of</b>	- CEST

	<b>Relapsing Multiple Sclerosis: Interim Results of the Phase 3b EXCHANGE Study</b> <i>Speaker:</i> Amit Bar-Or, US	
P673	<b>Flushing and Flushing-Related Adverse Events With Diroximel Fumarate in Patients With Relapsing-Remitting Multiple Sclerosis: Results from the Phase 3 EVOLVE-MS-2 Study</b> <i>Speaker:</i> Barry Singer, US	- CEST
P674	<b>Exploratory Analysis of Serum GDF-15 Levels in Patients Receiving Subcutaneous Interferon Beta-1a in the REFLEX Trial</b> <i>Speaker:</i> Mali Coray, CH	- CEST
P675	<b>Comparative effectiveness, safety, and immunogenicity of Rituximab biosimilars (Truxima/Ritemvia and Rixathon) to their originator (Mabthera) in Multiple Sclerosis</b> <i>Speaker:</i> Nicky Dunn, SE	- CEST
P676	<b>Ocrelizumab Versus Fingolimod After Natalizumab Cessation in Multiple Sclerosis: An Observational Study</b> <i>Speaker:</i> Kevin Bigaut, FR	- CEST
P677	<b>Early high efficacy treatment in multiple sclerosis is the best predictor of no disease activity over one and two years in a Norwegian population-based registry</b> <i>Speaker:</i> Cecilia Simonsen, NO	- CEST
P678	<b>ADDITIONAL COURSES OF ALEMTUZUMAB IN SUB-OPTIMAL RESPONDER MULTIPLE SCLEROSIS PATIENTS ARE SAFE AND EFFECTIVE: EXPERIENCE FROM 15 ITALIAN MS CENTERS</b> <i>Speaker:</i> Damiano Baroncini, IT	- CEST
P679	<b>Comparative effectiveness of ublituximab versus other disease-modifying therapies in patients with relapsing multiple sclerosis</b> <i>Speaker:</i> Rina Mehta, US	- CEST
P680	<b>Fenebrutinib reduces disease activity in a mouse model of inflammatory multiple sclerosis, which is associated with reduced microglial activation</b> <i>Speaker:</i> Martin Weber, DE	- CEST
P681	<b>Anti-CD20 disease modifying therapies decrease the humoral response to COVID-19 mRNA vaccination in patients with multiple sclerosis</b> <i>Speaker:</i> Andrew Wolf, US	- CEST
P682	<b>Real-world influence of race/ethnicity on response and tolerability of multiple sclerosis treatment: a 20-year comparative study</b> <i>Speaker:</i> Carlos A. Pérez, US	- CEST
P683	<b>Covid-19 (inactivated and mRNA) vaccine and humoral response in people with multiple Sclerosis: Chilean cohort</b> <i>Speaker:</i> Lorna Galleguillos, CL	- CEST

P684	<b>Immunological assessment in multiple sclerosis patients treated with ocrelizumab</b> <i>Speaker:</i> Valentina Mazziotti, IT	- CEST
P685	<b>Disease activity after discontinuation of disease-modifying therapies in patients with multiple sclerosis in Argentina: data from the nationwide registry RelevaEM</b> <i>Speaker:</i> Gisela Zanga, AR	- CEST
P686	<b>B-cell levels and immunity in breastfed infants of women with MS treated with ocrelizumab: design of a Phase 4 study (SOPRANINO)</b> <i>Speaker:</i> Riley Bove, US	- CEST
P687	<b>Phenotype and recovery from relapses in patients with Relapsing Remitting Multiple Sclerosis with their first DMT prescription: an Italian registry study</b> <i>Speaker:</i> Emanuele D'Amico, IT	- CEST
P688	<b>Does the reason for the switch to fingolimod affect the treatment response?</b> <i>Speaker:</i> Taha Aslan, TR	- CEST
P689	<b>Ocrelizumab treatment in multiple sclerosis: a real world observational multi-center study to confirm efficacy on disability accrual and explore prognostic factors of response to treatment.</b> <i>Speaker:</i> Roberta Lanzillo, IT	- CEST
P690	<b>Infusion-related reactions in Black/African American and Hispanic/Latino patients treated with ocrelizumab administered as a shorter infusion</b> <i>Speaker:</i> Faria Amjad, US	- CEST
P691	<b>2-year follow-up of Finnish multiple sclerosis patients treated with cladribine tablets</b> <i>Speaker:</i> Ilkka Rauma, FI	- CEST
P692	<b>Comparing the Impact of Dose Titration on Gastrointestinal Tolerability: Diroximel Fumarate Versus Dimethyl Fumarate in Patients with Relapsing-Remitting Multiple Sclerosis</b> <i>Speaker:</i> Robert Naismith, US	- CEST
P693	<b>Treatment of multiple sclerosis with natalizumab: experiences from a real-life cohort over 15 years</b> <i>Speaker:</i> Michael Auer, AT	- CEST
P694	<b>Safety and effectiveness of cladribine in multiple sclerosis – clinical experience of five tertiary centers</b> <i>Speaker:</i> Mónica Santos, PT	- CEST
P695	<b>Evaluation of Immunoglobulin Levels and COVID-19 Disease Course in patients with Multiple Sclerosis under Ocrelizumab therapy: a tertiary center experience</b> <i>Speaker:</i> Nazire Pinar Acar - Ozen, TR	- CEST

## Scientific program

P696	<b>Safety and Efficacy of Siponimod in Patients with Active Secondary Progressive Multiple Sclerosis Identifying as Hispanic from the Phase 3 EXPAND Study</b> <i>Speaker:</i> Stanley Cohan, US	- CEST
P697	<b>Glatiramer Acetate Depot (extended-release) phase IIa study in patients with Primary Progressive Multiple Sclerosis: safety and efficacy snapshot</b> <i>Speaker:</i> Shlomo Flechter, IL	- CEST
P698	<b>Hemophagocytic lymphohistiocytosis and alemtuzumab: a rescue or a cause?</b> <i>Speaker:</i> Eva Koban, SI	- CEST
P699	<b>Ex vivo modulation of fatty acid metabolism of PBMC from multiple sclerosis patients</b> <i>Speaker:</i> Carolin Blask, DE	- CEST
P700	<b>Endocannabinoid levels in peripheral blood mononuclear cells of multiple sclerosis patients treated with dimethyl fumarate. A longitudinal study.</b> <i>Speaker:</i> Alicia Sánchez-Sanz, ES	- CEST
P701	<b>A broad effect of ocrelizumab on the peripheral immune component in patients with early relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Alexandra Garcia, FR	- CEST
P702	<b>CELLO: a phase IV, multicenter, randomized, double-blind, placebo-controlled study assessing efficacy of ocrelizumab in radiologically isolated syndrome</b> <i>Speaker:</i> Erin E. Longbrake, US	- CEST
P703	<b>Effect of Ponesimod Compared With Teriflunomide on Treatment With Concomitant Corticosteroids for Relapse in Patients with Relapsing Forms of Multiple Sclerosis</b> <i>Speaker:</i> Camilo Obando, US	- CEST
P704	<b>Two-year real-world experience with Ocrelizumab in the treatment of patients with multiple sclerosis.</b> <i>Speaker:</i> Brandi Vollmer, US	- CEST
P705	<b>A Real World Multi Centre Study on Efficacy and Safety of Natalizumab in Indian patients with Multiple Sclerosis</b> <i>Speaker:</i> Thomas Mathew, IN	- CEST

## Poster Session

16:45 - 18:45 CEST

**eP38 - ePoster - Multi-disciplinary rehabilitation**

P878	<b>Is the Multiple Sclerosis Population of the Rehabilitation Centers Vulnerable During the Covid?19 Pandemic?</b> <i>Speaker:</i> Michela Ponzio, IT	- CEST
P879	<b>Promoting physical activity in patients with MS: A needs</b>	- CEST

**assessment survey of Canadian Neurologists***Speaker:* Simon Thebault, CA

- P880 **MS Nurse care: Patterns of access and impact on health outcomes** - CEST  
*Speaker:* Ingrid van der Mei, AU

*Poster Session*

16:45 - 18:45 CEST

**eP39 - ePoster - Symptoms Management (including cognition, fatigue, imbalance)**

- P881 **Effects of Melatonin on Sleep Disturbances in Multiple Sclerosis: A Pilot Study** - CEST  
*Speaker:* Wan-Yu Hsu, US
- P882 **A Phase II Randomised Controlled Trial of An Early Tailored Cognitive Behavioural Therapy Based Intervention for Depression in Those Newly Diagnosed with Multiple Sclerosis (ACTION-MS): Preliminary results** - CEST  
*Speaker:* Litza Kiriopoulou, AU
- P883 **Relationships between Brain Volume and disability, cognition, motor function, and MS-fatigue in RMS: MS-fatigue and ambulation move at their own pace** - CEST  
*Speaker:* Frederik Barkhof, NL
- P884 **Assessment and management of cognition and mood in people with multiple sclerosis in Ireland: A national survey** - CEST  
*Speaker:* Sinéad M. Hynes, IE
- P885 **Investigating the effect of expressive writing on level of sexual dysfunction in iranian women with multiple sclerosis: A Randomized controlled trial** - CEST  
*Speaker:* Seyed Massood Nabavi, IR
- P886 **The impact of cognitive symptoms in Multiple Sclerosis** - CEST  
*Speaker:* Hannah Morris-Bankole, GB
- P887 **Effect of exergaming in persons with multiple sclerosis with restless legs syndrome: a randomized controlled trial** - CEST  
*Speaker:* Asiye Tuba Ozdogar, TR
- P888 **Fingolimod and cognition: a longitudinal study** - CEST  
*Speaker:* Line Pfaff, FR
- P889 **The impacts of including a PPI Embedded Patient Researcher on clinical trials for Multiple Sclerosis** - CEST  
*Speaker:* Robert A. Joyce, IE
- P890 **Serum vitamin D level is associated with speed of processing in multiple sclerosis patients** - CEST  
*Speaker:* Hala Darwish, LB
- P891 **Teriflunomide and cognition: a longitudinal study** - CEST  
*Speaker:* Line Pfaff, FR

- P892 **Effect of Disease-modifying treatments on cognitive impairment in MS** - CEST  
*Speaker:* Line Pfaff, FR

*Poster Session*  
 16:45 - 18:45 CEST

**ePoster Library**

*Poster Session*  
 16:45 - 18:45 CEST

**eP01 - ePoster - Diagnosis and differential diagnosis**

- P001 **MRI Activity versus Relapses as Markers of Disease Activity in SPMS: Data from Real World and Pivotal Clinical Studies** - CEST  
*Speaker:* Gavin Giovannoni, GB
- P002 **Do we need separate MRI diagnostic criteria for primary progressive multiple sclerosis?** - CEST  
*Speaker:* Madiha Shatila, GB
- P003 **Detection of IgM to phosphatidylcholine in serum samples is a major diagnosis marker in MS.** - CEST  
*Speaker:* Maria Cruz Sádaba, ES
- P004 **Isolated CNS familial Hemophagocytic Lymphohistiocytosis (HLH) in children presenting as a mimic of demyelination in children** - CEST  
*Speaker:* Omar Abdel-Mannan, GB
- P005 **Brighter spotty lesion on spinal MRI: Is it helpful in differentiating AQP4 antibody positive neuromyelitis optica spectrum disorder from MOG antibody associated disease?** - CEST  
*Speaker:* Jae-Won Hyun, KR
- P006 **Accumulative risk of progression in radiologically isolated syndrome in Argentina: data from the nationwide registry RelevEM** - CEST  
*Speaker:* Juan Ignacio Rojas, AR
- P007 **Pseudocystic inflammatory demyelinating lesions in multiple sclerosis: a clinical, radiological and pathological description** - CEST  
*Speaker:* Florent Cluse, FR
- P008 **Treatment patterns in secondary progressive multiple sclerosis a multi-country registry study from five European countries** - CEST  
*Speaker:* Richard Nicholas, GB
- P009 **Risk of progression after 24 months in low risk radiologically isolated syndrome in Argentina** - CEST  
*Speaker:* Juan Ignacio Rojas, AR
- P010 **Susac Syndrome, an increasing misdiagnosis of Multiple Sclerosis** - CEST  
*Speaker:* Mariano Marrodan, AR

## Scientific program

P011	<b>Diagnosis, differential diagnosis and misdiagnosis of Susac syndrome</b> <i>Speaker:</i> James Triplett, AU	- CEST
P012	<b>Comparison of the 2010 and 2017 McDonald Criteria for diagnosis of primary progressive multiple sclerosis.</b> <i>Speaker:</i> Katelijjn Blok, NL	- CEST
P013	<b>Platelet-to-lymphocyte ratio as a peripheral biomarker that may help to differentiate MS from NMOSD at disease onset</b> <i>Speaker:</i> Edgar Carnero Contentti, AR	- CEST
P014	<b>Radiologically Isolated Syndrome (RIS): Reliability of 2009 RIS criteria</b> <i>Speaker:</i> Céline Callier, FR	- CEST
P015	<b>COVID-19 Induced Longitudinal Extensive Myelitis</b> <i>Speaker:</i> Busra S. Arica Polat, TR	- CEST
P016	<b>Examining the diagnostic potential of an extended virus antigen panel in multiple sclerosis</b> <i>Speaker:</i> Cecilie Kylesbech, DK	- CEST
P017	<b>Study of Optic Nerve Topography value in the diagnosis of Multiple Sclerosis in Tunisians</b> <i>Speaker:</i> Saloua Mrabet, TN	- CEST
P018	<b>Neurogenetics evaluation of undiagnosed white matter disorders in adults</b> <i>Speaker:</i> Jennifer Orthmann-Murphy, US	- CEST
P019	<b>Acute Disseminated Encephalomyelitis following Vaccination against SARS-CoV-2: a case report</b> <i>Speaker:</i> Luciana Lazaro, AR	- CEST
P020	<b>Difficulties in diagnosis of primary progressive multiple sclerosis: a clinical perspective.</b> <i>Speaker:</i> Katelijjn Blok, NL	- CEST
P021	<b>Evaluating a New Patient Clinical Management Pathway</b> <i>Speaker:</i> Tanya King, GB	- CEST
P022	<b>Longitudinally extensive transverse myelitis following COVID-19 pneumonia</b> <i>Speaker:</i> Frédéric London, BE	- CEST

## Poster Session

16:45 - 18:45 CEST

**eP12 - ePoster - Clinical assessment tools**

P204	<b>What's in a name? The impact of definition and durability in clinical trial outcome measures in Relapsing-Remitting Multiple Sclerosis</b> <i>Speaker:</i> Sammita Satyanarayan, US	16:45 - 16:45 CEST
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## Scientific program

P205	<b>Evaluating no evidence of disease activity 4 in patients with relapsing multiple sclerosis: post hoc analysis of phase 3 and open-label extension studies of ozanimod</b> <i>Speaker:</i> Ludwig Kappos, CH	16:45 - 16:45 CEST
P206	<b>Can we rely on EDSS to accurately monitor disability? A study of inter and intra rater variability</b> <i>Speaker:</i> Mikael Cohen, FR	16:45 - 16:45 CEST
P207	<b>Validation of the Brief Assessment of Cognition (BAC) in multiple sclerosis</b> <i>Speaker:</i> Michael Jaworski III, US	16:45 - 16:45 CEST
P208	<b>Jump analyses via force plate in people with multiple sclerosis - an approach towards increased sensitivity in lower limb assessment</b> <i>Speaker:</i> Paul Bartscht, DE	16:45 - 16:45 CEST
P209	<b>dreaMS - Reliability and acceptance of smartphone-based remote monitoring for people with MS</b> <i>Speaker:</i> Johannes Lorscheider, CH	16:45 - 16:45 CEST
P210	<b>The Timed 25-Foot Walk Usefully Complements the EDSS Score in Multiple Sclerosis</b> <i>Speaker:</i> Birgit Helmlinger, AT	16:45 - 16:45 CEST
P211	<b>An approach of sensor-based measurement and machine learning for the profiling of mobility in early stages of multiple sclerosis</b> <i>Speaker:</i> Katrin Trentzsch, DE	16:45 - 16:45 CEST
P212	<b>Correlation between cognitive and brain MRI parameters in Japanese patients with multiple sclerosis</b> <i>Speaker:</i> Shoko Fukumoto, JP	16:45 - 16:45 CEST
P213	<b>Correlation of Multiple Sclerosis Impairment Scale (MSIS) with clinical and MRI outcomes in secondary progressive MS in comparison to EDSS</b> <i>Speaker:</i> Ásta Theódórsdóttir, DK	16:45 - 16:45 CEST
P214	<b>An evaluation of remote monitoring in people with MS during the COVID-19 pandemic</b> <i>Speaker:</i> Andrea Stennett, GB	16:45 - 16:45 CEST
P215	<b>Evaluation of Swedish National Board of Health and Welfare's quality care indicator M7 for Multiple Sclerosis – regular MRI examinations - at Medical Unit Neuro, Karolinska University Hospital</b> <i>Speaker:</i> Emma Sandström, SE	16:45 - 16:45 CEST
P216	<b>Timely Intervention, Monitoring and Education MATTERS in MS (TIME MATTERS in MS): global applicability of the MS Brain Health quality improvement tool</b> <i>Speaker:</i> Jeremy Hobart, GB	16:45 - 16:45 CEST

## Scientific program

P217	<b>Correlation between Manual Ability Measure-36 and three upper limb objective measures in people with Multiple Sclerosis</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Claudio Marcello Solaro, IT	
P218	<b>Remote administration of BICAMS measures and the Trail-Making Test to assess Cognitive Impairment in Multiple Sclerosis.</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Fionnuala Rogers, IE	
P219	<b>Complexity of postural control in minimally disabled people with multiple sclerosis</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Maria Gaughan, IE	
P220	<b>Normative values for Multiple Sclerosis functional tests and their correlation with self-administered values</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Laura Estefanía Arenas-Vargas, CO	
P221	<b>The impact of educational attainment measures on classification of cognitive impairment in Multiple Sclerosis</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Manuela Altieri, IT	
P222	<b>Characterization of the gait in patients with relapsing–remitting multiple sclerosis and secondary progressive multiple sclerosis measured by FeetMe® integrated sensor insole system: Results of the interim analysis</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Guillermo Izquierdo Ayuso, ES	
P223	<b>Annualized Relapse Rates for a Contemporary Multiple Sclerosis Clinic in the UK: A Retrospective Cohort Study</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Aimee Hibbert, GB	
P224	<b>Sensor socks for the analysis of spatiotemporal data and plantar pressure distribution in persons with multiple sclerosis</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Paul Bartscht, DE	
P225	<b>Comparison of early treatment response of Ocrelizumab in relapsing and progressive multiple sclerosis patients on the basis of cognitive functions</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Ergi Kaya, TR	
P226	<b>Evaluation of upper limb impairment in progressive multiple sclerosis using kinematic techniques</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Linford Fernandes, GB	
P227	<b>Multiple Sclerosis, Medication Management and the Role of Cognition: A Cross Sectional Study</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Jack Petroski, US	
P228	<b>Evaluation of the quality of the care pathway for patients with multiple sclerosis in France: results of an original study of a cohort of 700 patients</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> David Veillard, FR	

P229	<b>Early treatment response of Ocrelizumab in persons with multiple sclerosis: six-month results</b> <i>Speaker:</i> Sinem Ozcelik, TR	16:45 - 16:45 CEST
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*Poster Session*

16:45 - 18:45 CEST

**eP13 - ePoster - Patient reported outcomes**

P230	<b>Validation of PDDS and patient-reported relapses using digital technologies to monitor MS evolution with EDSS and physician-reported relapses</b> <i>Speaker:</i> Georgina Arrambide, ES	- CEST
P231	<b>MS and COVID-19 Vaccination: Hesitancy and Early Safety/Tolerability Data</b> <i>Speaker:</i> Samantha Epstein, US	- CEST
P232	<b>Five Distinct Health-Related Quality of Life Trajectories Among People with Multiple Sclerosis</b> <i>Speaker:</i> Julia O'Mahony, CA	- CEST
P233	<b>Earlier disease modifying therapy is associated with more favourable long-term patient reported outcomes in relapsing multiple sclerosis</b> <i>Speaker:</i> Anna He, SE	- CEST
P234	<b>Patient-Reported Outcomes Measures for Multiple Sclerosis: Patient Insights on Fatigue, Cognition, Pain and Depression, and their Interconnectivity</b> <i>Speaker:</i> Tanuja Chitnis, US	- CEST
P235	<b>Aligning Patient and Provider Goals for Care in Multiple Sclerosis: An In-Depth Look at the Experiences and Perspectives of Black or African American and White Patients with Multiple Sclerosis and Their Care Teams</b> <i>Speaker:</i> Mitzi Williams, US	- CEST
P236	<b>Safety of the BNT162b2 COVID-19 vaccine in Multiple Sclerosis: Early experience from a tertiary Multiple Sclerosis Center in Israel</b> <i>Speaker:</i> Itay Lotan, IL	- CEST
P237	<b>How do Illness Acceptance and Treatment Acceptance in multiple sclerosis relate to adherence?</b> <i>Speaker:</i> Lisa Healy, GB	- CEST
P238	<b>Improvements in QoL at 1 Year in Patients Treated With Cladribine Tablets for Highly Active Relapsing MS: An Interim Analysis of CLARIFY-MS</b> <i>Speaker:</i> Alessandra Solari, IT	- CEST
P239	<b>Health-related quality of life in neuromyelitis optica spectrum disorders patients in an Argentinean cohort</b> <i>Speaker:</i> Edgar Carnero Contentti, AR	- CEST

P240	<b>Early predictors of long-term functional and patient-reported outcomes in MS</b> <i>Speaker:</i> Gauruv Bose, US	- CEST
P241	<b>Employment status and associations with patient-reported outcome measures in patients with relapsing multiple sclerosis</b> <i>Speaker:</i> Frédéric London, BE	- CEST
P242	<b>Defining progressive MS and activity using patient related outcomes and MRI measures</b> <i>Speaker:</i> Luciana Midaglia, ES	- CEST
P243	<b>Changes in productivity and ability to work with natalizumab treatment in relapsing-remitting multiple sclerosis patients and impact of the COVID19 containment measures in France: the TITAN study</b> <i>Speaker:</i> Arnaud Kwiatkowski, FR	- CEST
P244	<b>Testing psychometric properties of spontaneous and deliberate mind wandering scales in people with Multiple Sclerosis</b> <i>Speaker:</i> Jessica Podda, IT	- CEST
P245	<b>Co-creating new patient-reported outcomes through the science with and of patient input: characterization of mood status in people with multiple sclerosis</b> <i>Speaker:</i> Ludovico Pedullà, IT	- CEST
P246	<b>The Contribution of Race to Patient-Reported Gait Disability in Multiple Sclerosis</b> <i>Speaker:</i> Deja Rose, US	- CEST
P247	<b>Questionnaire based satisfaction survey for telemedicine-based care in multiple sclerosis and related neuroimmunological disorders</b> <i>Speaker:</i> Huiam Mubarak, US	- CEST
P248	<b>SYMPTOM SEVERITY IN NEUROMYELITIS OPTICA SPECTRUM DISORDER FROM THE PATIENTS' PERSPECTIVE</b> <i>Speaker:</i> José E Meca-Lallana, ES	- CEST
P249	<b>Assessing diagnosis disclosure and concealment in Multiple Sclerosis: Development and initial validation of the DISCO-MS survey</b> <i>Speaker:</i> Anne Keever, US	- CEST
P250	<b>Meaning and Purpose for People with Multiple Sclerosis: Quality of Life Reflects More Than Apparent Physical Ability</b> <i>Speaker:</i> Olivia Kaczmarek, US	- CEST
P251	<b>Association between patient- and physician-reported disability measures in relapsing-remitting multiple sclerosis in the Tysabri Observational Program</b> <i>Speaker:</i> Helmut Butzkueven, AU	- CEST
P252	<b>Comparison of time to clinically meaningful improvement in</b>	- CEST

	<b>Neuro-QoL in patients treated with natalizumab versus ocrelizumab</b> <i>Speaker:</i> Carrie Hersh, US	
P253	<b>Evaluation of adherence to treatment in patients with multiple sclerosis from Argentina and Ecuador</b> <i>Speaker:</i> Ricardo Alonso, AR	- CEST
P254	<b>Retrospective study of correlation between clinical variables of breathing/phonation and patient reported outcomes in people with multiple sclerosis</b> <i>Speaker:</i> Andrea Tacchino, IT	- CEST
P255	<b>COVID-19 impact on the evolution of Mental Health in Multiple Sclerosis</b> <i>Speaker:</i> Irene Gil González, ES	- CEST
P256	<b>Real-World Patient-Reported Outcomes in RRMS Patients Transitioning to Alemtuzumab: Results From the PRO-ACT Study</b> <i>Speaker:</i> Sibyl E. Wray, US	- CEST
P257	<b>Fatigue Scores are Better in Pediatric Onset Multiple Sclerosis than Adult Onset Multiple Sclerosis</b> <i>Speaker:</i> Wendy M Coronado, US	- CEST
P258	<b>Importance of employment status on quality of life in persons with Multiple Sclerosis</b> <i>Speaker:</i> Sandra Vanotti, AR	- CEST
P259	<b>haMster: a smartphone application for remote patient monitoring in multiple sclerosis</b> <i>Speaker:</i> Patrick Altmann, AT	- CEST
P260	<b>Ageing multiple sclerosis patient experience to identify disease and treatment perception and changes over time.</b> <i>Speaker:</i> Javier Sotoca, ES	- CEST
P261	<b>Real-world safety and effectiveness of natalizumab treatment in patients with relapsing-remitting multiple sclerosis: data from an Irish registry</b> <i>Speaker:</i> Chris McGuigan, IE	- CEST
P262	<b>Impact of Covid-19: Preserving Services for Patients with Multiple Sclerosis during a Global Pandemic</b> <i>Speaker:</i> Stephen Ramsay, GB	- CEST
P263	<b>Center-level variation in Multiple Sclerosis outcomes: Real-world Patient Reported Outcomes (PROs) findings from the Multiple Sclerosis Continuous Quality Improvement (MS-CQI) research collaborative study (2017-2020)</b> <i>Speaker:</i> Brant Oliver, US	- CEST
P264	<b>Patient-reported outcome measures reflect multiple sclerosis-related disability</b>	- CEST

	<i>Speaker:</i> Frédéric London, BE	
P265	<b>Patient reported outcomes in a secondary progressive MS cohort related to cognition, MRI and physical outcomes</b> <i>Speaker:</i> Ásta Theódórsdóttir, DK	- CEST
P266	<b>Behavioral clusters and experienced fatigue in multiple sclerosis: A pilot study</b> <i>Speaker:</i> Philipp Gulde, DE	- CEST
P267	<b>Multiple Sclerosis, Medication Management, Health Literacy and Accumulative Cognitive Impairment: Is Perception Sufficient for Performance?</b> <i>Speaker:</i> Avtej Sethi, US	- CEST
P268	<b>Quality of life in Multiple Sclerosis: impact of disease and demographic factors</b> <i>Speaker:</i> Irene Gil González, ES	- CEST
P269	<b>Disease Activity and Patient-reported Outcomes in Patients With Multiple Sclerosis Switching From First-line Platform Therapies to Dimethyl Fumarate</b> <i>Speaker:</i> Kathryn Giles, CA	- CEST
P270	<b>The impact of the COVID-19 pandemic on people with multiple sclerosis: a longitudinal survey study</b> <i>Speaker:</i> Maria Scholz, DE	- CEST
P271	<b>The impact of the COVID-19 pandemic on Multiple Sclerosis Patients: One year later</b> <i>Speaker:</i> Laura Bello, ES	- CEST

*Poster Session*

16:45 - 18:45 CEST

**eP04 - ePoster - Neuropsychology**

P064	<b>NODDI microstructural abnormalities in normal-appearing gray matter and white matter contribute to cognitive impairment in multiple sclerosis</b> <i>Speaker:</i> Paolo Preziosa, IT	- CEST
P065	<b>The psychopharmacology of MS in Greece: a nationwide study on the basis of digital prescription records.</b> <i>Speaker:</i> Christos Bakirtzis, GR	- CEST
P066	<b>Impaired Awareness: Why people with Multiple Sclerosis continue using cannabis despite evidence to the contrary</b> <i>Speaker:</i> Anthony Feinstein, CA	- CEST
P067	<b>Cognitive functioning in pediatric-onset relapsing myelin oligodendrocyte glycoprotein (MOG) antibody disease</b> <i>Speaker:</i> Tracy Lauren Fabri, CA	- CEST
P068	<b>Validation of Canadian Regression Normative Data for the Minimal Assessment of Cognitive Function in Multiple Sclerosis</b>	- CEST

	<b>(MACFIMS)</b>	
	<i>Speaker:</i> Lisa Walker, CA	
P069	<b>Alexithymia is linked to depression and cognitive fatigue in radiologically isolated syndrome.</b>	- CEST
	<i>Speaker:</i> Héloïse Joly, FR	
P070	<b>The role of serum biomarkers in predicting cognitive status in people with multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Maureen van Dam, NL	
P071	<b>Theory of mind and its neuroanatomical correlates in patients with multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Hiroaki Yokote, JP	
P072	<b>General intelligence is affected in children with multiple sclerosis: Evidence from meta-analyses</b>	- CEST
	<i>Speaker:</i> Mariia Bogdanova, RU	
P073	<b>Work difficulties in people with multiple sclerosis: The role of depression, anxiety and coping</b>	- CEST
	<i>Speaker:</i> Elianne van Egmond, NL	
P074	<b>Different perception of cognitive deficits among inflammatory or progressive multiple sclerosis subtypes</b>	- CEST
	<i>Speaker:</i> Cl?udia Coll Martinez, ES	
P075	<b>False positives committed by patients with progressive multiple sclerosis in memory recognition tasks: disinhibition or memory problems?</b>	- CEST
	<i>Speaker:</i> Judit Salavedra Pont, ES	
P076	<b>Teriflunomide and Work problems in Multiple Sclerosis</b>	- CEST
	<i>Speaker:</i> Mahmut Unverdi, US	
P077	<b>What are multiple sclerosis (MS) patients saying on the web? WE-SEP: an innovative methodology to understand their needs and experiences</b>	- CEST
	<i>Speaker:</i> Michèle Montreuil, FR	
P078	<b>Is there a multiple sclerosis (MS) personality? Personality characteristics in persons with recently diagnosed MS at a single Canadian centre</b>	- CEST
	<i>Speaker:</i> Laura Chu, CA	
P079	<b>Discordance between neurologists and people with multiple sclerosis on the perception of the presence and burden of cognitive impairment</b>	- CEST
	<i>Speaker:</i> Iris-Katharina Penner, DE	
P080	<b>Motor and cognitive performances are associated beyond structural brain damage in relapsing-remitting multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Damiano Mistri, IT	
P081	<b>Factors contributing unemployment in persons with multiple</b>	- CEST

	<b>sclerosis: dual task effects.</b>	
	<i>Speaker:</i> María Bárbara Eizaguirre, AR	
P082	<b>Fatigue and episodic memory in relapsing-remitting multiple Sclerosis: A web-based study</b>	- CEST
	<i>Speaker:</i> Luke Allen, GB	
P083	<b>Memory for faces and emotion recognition in patients with relapsing-remitting multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Elisabeth Göttfried, AT	
P084	<b>Cognitive functioning in everyday life: The development of a questionnaire on instrumental activities of daily living in multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Maureen van Dam, NL	
P085	<b>Relationship Between Stigma and Symptom Burden in Patients with Multiple Sclerosis</b>	- CEST
	<i>Speaker:</i> Kubra Yeni, TR	
P086	<b>Cognitive impairment in clinically isolated syndromes : A control-case study.</b>	- CEST
	<i>Speaker:</i> Mohamed Islam Kediha, DZ	
P087	<b>Multicentric motor evoked potentials in multiple sclerosis: a retrospective pilot study</b>	- CEST
	<i>Speaker:</i> Cathérine Dekeyser, BE	
P088	<b>Using 7T MRI to determine lesion burden in the limbic system and its relation to anxiety and depression scores in persons with multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Alexandra Hillyer, CA	
P089	<b>Prevalence of cognitive impairment in a multiple sclerosis patients cohort with low disability</b>	- CEST
	<i>Speaker:</i> José E Meca-Lallana, ES	
P090	<b>Evaluating the effectiveness and acceptability of an ACT-informed Neuropsychology group for individuals with MS, delivered using videoconferencing.</b>	- CEST
	<i>Speaker:</i> Clodagh Cogley, IE	
P091	<b>A year with the fear of COVID-19 in Multiple Sclerosis Patients: Examination of depression, sleep quality and quality of life before and after the pandemic</b>	- CEST
	<i>Speaker:</i> Kubra Yeni, TR	
P092	<b>MindSEP mirror study: Multiple Sclerosis and Cognition, patient and doctor perspectives.</b>	- CEST
	<i>Speaker:</i> Bruno Brochet, FR	
P093	<b>Psychopathology profiles in patients presenting to a multiple sclerosis cognitive unit</b>	- CEST
	<i>Speaker:</i> Stefanie Roberts, AU	
P094	<b>The associations between cerebellar gray and white matter</b>	- CEST



**atrophy and cognition in patients with relapsing-remitting multiple sclerosis.**

*Speaker:* Jakub Komendziński, PL

*Poster Session*

16:45 - 18:45 CEST

**eP06 - ePoster - Progressive MS**

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|------|---|--------|
| P105 | <p><b>Cortical lesions at diagnosis predict conversion to secondary progressive multiple sclerosis and accumulation of disability: a 20-year follow-up study.</b></p> <p><i>Speaker:</i> Gian Marco Schiavi, IT</p>   | - CEST |
| P106 | <p><b>Contributors to secondary progressive multiple sclerosis conversion age – a federated learning analysis across five European MS registries</b></p> <p><i>Speaker:</i> Lars Forsberg, SE</p>   | - CEST |
| P107 | <p><b>Results From A Multicentre, Randomised, Double Blind, Placebo-Controlled Study of Repository Corticotropin Injection for Multiple Sclerosis Relapse That Inadequately Responded to Corticosteroids</b></p> <p><i>Speaker:</i> Aaron E. Miller, US</p> | - CEST |
| P108 | <p><b>Progression independent of relapse activity in early multiple sclerosis patients and risk of secondary progression: an Italian multicentre study</b></p> <p><i>Speaker:</i> Emilio Portaccio, IT</p>  | - CEST |
| P109 | <p><b>Demographic and clinical characteristics of treated and untreated patients with secondary progressive multiple sclerosis – analysis from three European registries</b></p> <p><i>Speaker:</i> Luigi Pontieri, DK</p>                                  | - CEST |
| P110 | <p><b>Impact of Covid-19 lockdown on a population of progressive Multiple Sclerosis patients in Northern Italy</b></p> <p><i>Speaker:</i> Chiara Bosa, IT</p>   | - CEST |
| P111 | <p><b>Smoking, cardiovascular risk factors and LRP2 gene variation: associations with disease severity, cognitive function and brain structure in primary progressive multiple sclerosis</b></p> <p><i>Speaker:</i> Helene Hoejsgaard Chow, DK</p>          | - CEST |
| P112 | <p><b>A pilot study: Identification of Cerebrospinal fluid pattern at diagnosis in Relapsing-Remitting and Secondary Progressive patients</b></p> <p><i>Speaker:</i> Anna Isabella Pisani, IT</p>   | - CEST |
| P113 | <p><b>Estimating the profile of responders to treatment: do different patients show benefits on different outcomes?</b></p> <p><i>Speaker:</i> Francesca Bovis, IT</p>  | - CEST |
| P114 | <p><b>Predictive factors for progression in elderly multiple sclerosis patients</b></p> <p><i>Speaker:</i> Anne Zinganell, AT</p>   | - CEST |

## Scientific program

P115	<b>Disease modifying treatment ameliorates disability worsening in patients with aggressive PPMS: Results from the Big MS Data network</b> <i>Speaker:</i> Johannes Lorscheider, CH	- CEST
P116	<b>A pilot study: The identification of cerebrospinal fluid profile prognostic of secondary progression at diagnosis of relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Anna Isabella Pisani, IT	- CEST
P117	<b>Real world experience with Ocrelizumab in patients with primary progressive multiple sclerosis: Insights from the German NeuroTransData registry</b> <i>Speaker:</i> Stefan Braune, DE	- CEST
P118	<b>Follow-up of a French cohort of progressive multiple sclerosis patients treated with anti-CD20 antibodies</b> <i>Speaker:</i> Maximilian Einsiedler, FR	- CEST
P119	<b>Development of Your MS Questionnaire: A Patient Completed? Digital Tool to Monitor Multiple Sclerosis Disease Symptoms and Their Impact on People's Life</b>  <i>Speaker:</i> Gavin Giovannoni, GB	- CEST
P120	<b>The role of the MS specialist nurse in the care for patients with primary progressive multiple sclerosis</b> <i>Speaker:</i> Katelijjn Blok, NL	- CEST
P121	<b>Heterogeneity on Long-Term Disability Trajectories in Secondary Progressive Ms Patients – A Latent Class Analysis from Big Ms Data Network????</b> <i>Speaker:</i> Alessio Signori, IT	- CEST
P122	<b>Monitoring cognition in Relapsing-Remitting Multiple Sclerosis (RRMS) and Secondary Progressive Multiple Sclerosis (SPMS) patients</b> <i>Speaker:</i> Joanna White, GB	- CEST
P123	<b>Effect of natalizumab on disability progression in patients with non-active secondary progressive multiple sclerosis in ASCEND</b> <i>Speaker:</i> Zhe Chen, US	- CEST
P124	<b>Disability in primary progressive multiple sclerosis study from Argentinean registry cohort study (RelevarEM)</b> <i>Speaker:</i> Ricardo Alonso, AR	- CEST

## Poster Session

16:45 - 18:45 CEST

**eP05 - ePoster - Paediatric MS**

P095	<b>CONNECT: An Open-label, Active-controlled Dimethyl Fumarate Study in Pediatric Patients with Relapsing-Remitting Multiple</b>	- CEST
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	<b>Sclerosis</b>	
	<i>Speaker:</i> Amir-Hadi Maghzi, US	
P096	<b>Assessing treatment response in pediatric multiple sclerosis patients</b>	- CEST
	<i>Speaker:</i> Ermelinda De Meo, IT	
P097	<b>Using historical relapse rates for the design of an innovative Phase 3 study with ofatumumab and siponimod in paediatric multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Jutta Gärtner, DE	
P098	<b>The difference in the Blood Transcriptional Profiles in Pediatric and Adult Multiple Sclerosis Patients.</b>	- CEST
	<i>Speaker:</i> Eitan Shavit, IL	
P099	<b>Rituximab in Paediatric Onset Multiple Sclerosis - A Retrospective Observational Study</b>	- CEST
	<i>Speaker:</i> Julian Benedikt Reichelt, AT	
P100	<b>Neuropsychological Tests Do Not Adequately Screen for Academic Impairment in Children with Multiple Sclerosis</b>	- CEST
	<i>Speaker:</i> Wendy Vargas, US	
P101	<b>Children with Multiple Sclerosis Struggle Academically to a Greater Extent than is Predicted by Standard Neuropsychological Testing</b>	- CEST
	<i>Speaker:</i> Wendy Vargas, US	
P102	<b>Innovative Phase 3 NEOS study design evaluating efficacy and safety of ofatumumab and siponimod versus fingolimod in paediatric multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Jutta Gärtner, DE	
P103	<b>Pediatric-onset multiple sclerosis: differences in disease burden and activity at onset and follow-up in pediatric-onset patients vs adult-onset patients</b>	- CEST
	<i>Speaker:</i> Carmela Capillo, IT	
P104	<b>Relapse rates and disability progression in paediatric onset MS patients during the course of the disease.</b>	- CEST
	<i>Speaker:</i> David Ellenberger, DE	
<i>Poster Session</i>		
16:45 - 18:45 CEST		
<b>eP09 - ePoster - MS and gender</b>		
P161	<b>Hormone replacement therapy and disease activity in Danish women with multiple sclerosis - a population-based cohort study</b>	- CEST
	<i>Speaker:</i> Tine Iskov Kopp, DK	
P162	<b>Pregnancies are associated with lower risk of multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Christiane Gasperi, DE	

## Scientific program

P163	<b>The influence of biological sex on cognitive performance in people with multiple sclerosis</b> <i>Speaker:</i> Manuela Altieri, IT	- CEST
P164	<b>Smoking, early menopause, and early progression in MS</b> <i>Speaker:</i> Burcu Zeydan, US	- CEST
P165	<b>Family Planning Concerns and Unmet Need for Contraception in Women with Multiple Sclerosis in Colombia</b> <i>Speaker:</i> Lorena López-Reyes, CO	- CEST
P166	<b>MS DREAMS: Menopause and Sleep Dysfunction: Reports and Assessments from Multiple Sclerosis Patients</b> <i>Speaker:</i> Jessica Singh, US	- CEST
P167	<b>The effect of sex and race on delays in multiple sclerosis evaluation and diagnosis: An updated analysis</b> <i>Speaker:</i> Amy Safadi, US	- CEST

## Poster Session

16:45 - 18:45 CEST

**eP35 - ePoster - Tools for detecting therapeutic response**

P796	<b>Predictive Value of NEDA for Long-term Disability in Multiple Sclerosis: A Systematic Review and Meta-analysis</b> <i>Speaker:</i> Dalia L. Rotstein, CA	- CEST
P797	<b>Assessing treatment response to oral drugs for Multiple Sclerosis in real world setting: a MAGNIMS study</b> <i>Speaker:</i> Serena Ruggieri, IT	- CEST
P798	<b>Optical coherence tomography changes one year after treatment onset and its relation to treatment response scores</b> <i>Speaker:</i> Paula Tagliani, ES	- CEST
P799	<b>Acapella: B-Cell Repletion in Ocrelizumab-Treated Patients</b> <i>Speaker:</i> Rose-Marie Jungquist, US	- CEST
P800	<b>CHANGES IN THE IMMUNE CELL PROFILE ASSOCIATED WITH RESPONSE TO OCRELIZUMAB IN PPMS.</b> <i>Speaker:</i> Jose Ignacio Fernandez-Velasco, ES	- CEST
P801	<b>Cognition as a parameter that should not be ignored when evaluating the effect of relapse treatment: A prospective controlled study</b> <i>Speaker:</i> Bilge Cinar, TR	- CEST
P802	<b>Dimethyl fumarate and fingolimod utilization and costs for multiple sclerosis: A population-based study in the Campania Region of Italy</b> <i>Speaker:</i> Marcello Moccia, GB	- CEST
P803	<b>Neurometabolic changes in RRMS: comparison between fingolimod and injectables therapies</b> <i>Speaker:</i> Oun Al-iedani, AU	- CEST

## Scientific program

P804	<b>Clinical, life-style and genetic determinants of response to natalizumab: a 13-year nationwide phase IV study</b> <i>Speaker:</i> Ali Manouchehrinia, SE	- CEST
P805	<b>Immunoglobulin repertoire analysis in multiple sclerosis patients reveals distinct treatment effects after initiation of dimethyl fumarate or teriflunomide therapy</b> <i>Speaker:</i> Christoph Ruschil, DE	- CEST
P806	<b>micro-RNA expression profile in PBMCs changes after Alemtuzumab treatment in patients with relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Anne Ladwig, DE	- CEST
P807	<b>Assessing predictors of no-evidence of disease activity in RRMS patients initiating Dimethyl Fumarate in a real-world setting</b> <i>Speaker:</i> Sarmad Al-Araji, GB	- CEST
P808	<b>First two-year composite of NEDA-3 status and MAGNIMS score predict long-term disability: A “real-world” single centre cohort study</b> <i>Speaker:</i> Maximilian Pistor, CH	- CEST
P809	<b>Multiple Sclerosis, Natalizumab, Cognition: Multi-Domain Cognitive NEDA</b> <i>Speaker:</i> Olivia Kaczmarek, US	- CEST
P810	<b>Assessing the immune response to SARS-CoV-2 mRNA vaccines in patients with secondary progressive multiple sclerosis treated with siponimod (AMA-VACC clinical trial)</b> <i>Speaker:</i> Tjalf Ziemssen, DE	- CEST
P811	<b>CSF inflammatory markers: prediction of treatment response in early relapsing remitting multiple sclerosis?</b> <i>Speaker:</i> Damiano Marastoni, GB	- CEST

*Poster Session*

16:45 - 18:45 CEST

**eP29 - ePoster - Fluid Biomarkers**

P565	<b>Factors influencing serum neurofilament light chain levels in normal ageing</b> <i>Speaker:</i> Michael Khalil, AT	- CEST
P566	<b>Assessment of the correlation between T-cell repertoire diversity and measures of disease activity and severity in multiple sclerosis patients</b> <i>Speaker:</i> Laura Ferrè, IT	- CEST
P567	<b>Kappa free light chains in cerebrospinal fluid predict early multiple sclerosis disease activity</b> <i>Speaker:</i> Harald Hegen, AT	- CEST
P568	<b>Prognostication of confirmed disease progression in patients</b>	- CEST

	<b>with primary progressive MS (PPMS) by serum neurofilament light chain levels and multimodal evoked potentials</b>	
	<i>Speaker:</i> Martin Hardmeier, CH	
P569	<b>High or increasing serum NfL predicts impending multiple sclerosis relapses</b>	- CEST
	<i>Speaker:</i> Simon Thebault, CA	
P570	<b>Relationships between on-treatment changes in glial fibrillary acidic protein levels and clinical outcomes in patients with relapsing multiple sclerosis: post hoc analysis of the phase 3 ozanimod SUNBEAM trial</b>	- CEST
	<i>Speaker:</i> Sarah Harris, US	
P571	<b>Different sNfL level cut-offs at the time of the CIS predict inflammatory and disability outcomes when used as a surrogate biomarker of MRI</b>	- CEST
	<i>Speaker:</i> Georgina Arrambide, ES	
P572	<b>INCREASED SERUM NEUROFILAMENT LIGHT IN ASYMPTOMATIC INDIVIDUALS PRECEDING CLINICAL ONSET OF MULTIPLE SCLEROSIS</b>	- CEST
	<i>Speaker:</i> Daniel Jons, SE	
P573	<b>Serum neurofilament light as a biomarker of disability and neurodegeneration in MS patients of the same age</b>	- CEST
	<i>Speaker:</i> Floor C. Loonstra, NL	
P574	<b>Clinical Validation Study Results of a Multivariate Proteomic Serum Based Assay for Disease Activity Assessments in MS</b>	- CEST
	<i>Speaker:</i> Ferhan Qureshi, US	
P575	<b>Improved prediction of early cognitive impairment in multiple sclerosis using combinations of blood and imaging biomarkers</b>	- CEST
	<i>Speaker:</i> Tobias Brummer, DE	
P576	<b>B cell-related immunophenotyping and protein profile of cerebrospinal fluid in multiple sclerosis patients at diagnosis</b>	- CEST
	<i>Speaker:</i> Roberta Magliozzi, IT	
P577	<b>Clustering is associated with poor response to teriflunomide in multiple sclerosis patients</b>	- CEST
	<i>Speaker:</i> Sunny Malhotra, ES	
P578	<b>Analysis of extracellular vesicles in plasma using flow cytometry reveals increased lymphocyte-derived particles in multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Stephanie N. Blandford, CA	
P579	<b>Revisiting cerebrospinal fluid findings in patients with multiple sclerosis: What novel population-based reference limits change</b>	- CEST
	<i>Speaker:</i> Klaus Berek, AT	
P580	<b>Factors contributing to CSF NfL reduction over time in people with multiple sclerosis starting treatment: an observational</b>	- CEST

	<b>study</b> <i>Speaker:</i> Ide Smets, GB	
P581	<b>Predicting aggressive multiple sclerosis with intrathecal IgM synthesis: a comparative study between quantitative and qualitative methods</b> <i>Speaker:</i> Enric Monreal, ES	- CEST
P582	<b>Plasma Neurofilament Light Chain in Children With Relapsing MS Receiving Teriflunomide or Placebo: A Post Hoc Analysis of the Randomised TERIKIDS Trial</b> <i>Speaker:</i> Jens Kuhle, CH	- CEST
P583	<b>Neurofilament light chain as serum biomarker in Multiple Sclerosis, MOG-antibody disease and Neuromyelitis Optica Spectrum disorders</b> <i>Speaker:</i> Luca Bollo, IT	- CEST
P584	<b>Molecular biomarker signature associated with cladribine treatment</b> <i>Speaker:</i> Nicolás Fissolo, ES	- CEST
P585	<b>Real life experience of Cladribine effects on lymphocyte subsets and serum Neurofilament Light chains levels changes</b> <i>Speaker:</i> Damiano Paolicelli, IT	- CEST
P586	<b>Serum Neurofilament and GFAP remain elevated in MS patients following mesenchymal stem cell transplantation for multiple sclerosis</b> <i>Speaker:</i> Simon Thebault, CA	- CEST
P587	<b>Circulating microRNAs in RRMS patients treated with dimethyl fumarate in the phase 4 TREMEND trial</b> <i>Speaker:</i> Maria Louise Elkjaer, DK	- CEST
P588	<b>Age-sensitive peripheral blood immune markers in multiple sclerosis and healthy controls</b> <i>Speaker:</i> Catherine Larochelle, CA	- CEST
P589	<b>Peripheral haemolysis in relation to iron rim formation in multiple sclerosis</b> <i>Speaker:</i> Nik Krajnc, AT	- CEST
P590	<b>Swedish MS registry data improvement and evaluation study: Which CSF variable reflects best MRI activity in MS patients</b> <i>Speaker:</i> Adnan Adel Masood, SE	- CEST
P591	<b>Vitamin D levels are not associated with retinal thinning in multiple sclerosis</b> <i>Speaker:</i> Nik Krajnc, AT	- CEST
P592	<b>Clinical and subclinical treatment effect is associated with serum Neurofilament decrease in fingolimod treated people with multiple sclerosis</b> <i>Speaker:</i> Katja Akgün, DE	- CEST

P593	<b>Prognostic impact of cerebrospinal fluid parameters on retinal layer thickness in multiple sclerosis – the CSFViennOCTiMS study</b> <i>Speaker:</i> Nik Krajnc, AT	- CEST
P594	<b>CSF INFLAMMATORY PROFILE IN CLINICALLY ISOLATED SYNDROME AND DEFINITE MULTIPLE SCLEROSIS PATIENTS.</b> <i>Speaker:</i> Albulena Bajrami, IT	- CEST
P595	<b>Ponesimod shows improved effect on Brain Volume compared with other DMTs, a model-based meta-analysis</b> <i>Speaker:</i> Maria Ait-Tihyaty, US	- CEST
P596	<b>Extracellular Vesicles as Biomarkers of Cell-Specific Activity in MS Patients with Chronic Active Lesions</b> <i>Speaker:</i> Jennifer Linden, US	- CEST
P597	<b>Basal levels of serum neurofilament light in normal aging and multiple sclerosis patients</b> <i>Speaker:</i> Raquel Gasque Rubio, ES	- CEST
P598	<b>Serum neurofilament light chain levels in progressive Multiple Sclerosis: preliminary results of a prospective longitudinal study</b> <i>Speaker:</i> Diana Ferraro, IT	- CEST
P599	<b>Decrease of neurofilament is associated with reduction of clinical disease activity in glatiramer acetate treated people with multiple sclerosis</b> <i>Speaker:</i> Urszula Konofalska, DE	- CEST
P600	<b>Blood parameter analysis in pediatric MOG-antibody-associated disorders</b> <i>Speaker:</i> Christian Lechner, AT	- CEST
P601	<b>CSF and serum inflammatory mediators' profiles in MS patients at time of diagnosis: partial correlation between peripheral and intrathecal inflammation</b> <i>Speaker:</i> Francesco Pezzini, IT	- CEST
P602	<b>Cerebrospinal fluid kappa free light chains and IgM index for diagnosis and prognosis in multiple sclerosis</b> <i>Speaker:</i> Sara Gil-Perotin, ES	- CEST
P603	<b>Eomesodermin positive cytotoxic T lymphocytes are associated with an aggressive course of primary progressive multiple sclerosis</b> <i>Speaker:</i> Simon Faissner, DE	- CEST
P604	<b>Research of Biomarkers to Reduce the Risk of Progressive Multifocal Leukoencephalopathy in RRMS Patients Under Natalizumab Treatment</b> <i>Speaker:</i> Silvia Presas-Rodríguez, ES	- CEST
P605	<b>Cerebrospinal fluid lymphocytic pleocytosis at MS diagnosis does not predict a worse long-term disability prognosis</b>	- CEST



	<i>Speaker:</i> Cris S. Constantinescu, GB	
P606	<b>EXAMINATION OF TEAR FLUID IN PATIENTS WITH PRE-DIAGNOSIS OF MS</b> <i>Speaker:</i> Murat Terzi, TR	- CEST
P607	<b>Cognitive impairment in early stages of multiple sclerosis is associated with high cerebrospinal fluid levels of Tau protein</b> <i>Speaker:</i> Eleonora Virgilio, IT	- CEST
P608	<b>Abstract: Using Circulatory biomarkers to predict disease progression in Multiple Sclerosis (MS).</b> <i>Speaker:</i> Nitzan Haham, IL	- CEST
P609	<b>Longitudinal analysis of autoreactive T cells in a cohort of multiple sclerosis patients treated with natalizumab</b> <i>Speaker:</i> Barbara Willekens, BE	- CEST

*Poster Session*

16:45 - 18:45 CEST

**eP17 - ePoster - Digital health and global networks**

P302	<b>Passively acquired smartphone keystroke dynamics are associated with clinical outcomes in multiple sclerosis: a longitudinal analysis</b> <i>Speaker:</i> Ka Hoo Lam, NL	- CEST
P303	<b>A digital remote assessment for measuring impairment in information processing speed in people with MS</b> <i>Speaker:</i> Frank Dondelinger, CH	- CEST
P304	<b>Deep grey matter atrophy predicts longitudinal worsening of gait dynamics in progressive MS; a gait biosensor subgroup analysis of the MS-SMART clinical trial [NCT01910259]</b> <i>Speaker:</i> David Paling, GB	- CEST
P305	<b>The importance of quality checks for digital health studies using remote unsupervised assessments to study functional impairment in MS</b> <i>Speaker:</i> Andrea Festanti, CH	- CEST
P306	<b>Novel smartphone sensor-based scores for remote measurement of gait and hand function impairment in people with MS</b> <i>Speaker:</i> Daria Rukina, CH	- CEST
P307	<b>Passively collected smartphone-based keystroke dynamics could classify disease severity within MS based on a machine learning approach</b> <i>Speaker:</i> Ka Hoo Lam, NL	- CEST
P308	<b>Establishing consensus definitions of smartphone-based digital outcome measurements in multiple sclerosis</b> <i>Speaker:</i> Christine Guo, US	- CEST

## Scientific program

P309	<b>A patient-focused qualitative study to support content validity of digital performance assessments in MS</b> <i>Speaker:</i> Susanne Clinch, GB	- CEST
P310	<b>Evaluating Perceptions of Ofatumumab in Multiple Sclerosis via Social Media Listening – Early 6 Months Post Approval Data</b> <i>Speaker:</i> Mitzi Williams, US	- CEST
P311	<b>Telemedicine in multiple sclerosis care during coronavirus pandemic: A patient satisfaction survey.</b> <i>Speaker:</i> Marta Cañaverol Díaz, ES	- CEST
P312	<b>Effect of Education on Physician Knowledge on Hidden Symptoms in Patients With Multiple Sclerosis</b> <i>Speaker:</i> Lionel Thevathasan, GB	- CEST
P313	<b>Understanding symptoms and their impact on patients with Multiple Sclerosis: What we can learn from social media</b> <i>Speaker:</i> Ganhui Lan, US	- CEST

## Poster Session

16:45 - 18:45 CEST

**eP18 - ePoster - Pathology**

P314	<b>Sex differences in neuroinflammation and neuroactive steroids synthesis in the multiple sclerosis cortical grey matter</b> <i>Speaker:</i> Nina Louise Fransen, NL	- CEST
P315	<b>Distribution and Abundance of Oxysterols in the Human Multiple Sclerosis Brain</b> <i>Speaker:</i> Kristen Hawkins, GB	- CEST
P316	<b>In vivo assessment of glymphatic function in multiple sclerosis: a new pathological mechanism underpinning disease burden</b> <i>Speaker:</i> Antonio Carotenuto, IT	- CEST
P317	<b>Towards a new resource for the MS brain: a cross-brain bank proteomic atlas of non-lesional neocortex</b> <i>Speaker:</i> Philip De Jager, US	- CEST
P318	<b>Regional grey matter pathology and network reconfiguration are linked to epilepsy occurrence in patients with multiple sclerosis</b> <i>Speaker:</i> Dumitru Ciolac, DE	- CEST
P319	<b>Multiplexed imaging of the multiple sclerosis meninges using mass cytometry</b> <i>Speaker:</i> Valeria Ramaglia, CA	- CEST
P320	<b>Inflammation is associated with demyelination and neurodegeneration in the brainstem of patients with progressive multiple sclerosis</b> <i>Speaker:</i> Nina Louise Fransen, NL	- CEST

Poster Session

16:45 - 18:45 CEST

**eP16 - ePoster - Comorbidity**

P289	<b>Racial Disparities in Hypertension Management Among Multiple Sclerosis Patients</b> <i>Speaker:</i> Devon Conway, US	- CEST
P290	<b>Illness Perceptions and Coping in the Relationship between Personality, Depression, Anxiety and Illness Acceptance in Multiple Sclerosis</b> <i>Speaker:</i> Rebekah Davenport, AU	- CEST
P291	<b>Vaccine hesitancy among people with multiple sclerosis.</b> <i>Speaker:</i> Siew Mei Yap, IE	- CEST
P292	<b>Impact of cancer immunotherapy on multiple sclerosis course and management.</b> <i>Speaker:</i> Louise Noroy, FR	- CEST
P293	<b>The role of comorbidities in long term prognosis in the Clinically Isolated Syndrome and early MS Barcelona inception cohort</b> <i>Speaker:</i> Simón Cárdenas-Robledo, CO	- CEST
P294	<b>Impact of comorbidity clusters of MS patients in healthcare resource usage: a Latent Class Analysis</b> <i>Speaker:</i> Simón Cárdenas-Robledo, CO	- CEST
P295	<b>An analysis of main symptoms of Covid-19 in MS patients and related risk factors</b> <i>Speaker:</i> Irene Schiavetti, IT	- CEST
P296	<b>Long COVID among people with MS: A prospective and longitudinal observational study of the UK MS Register</b> <i>Speaker:</i> Afagh Garjani, GB	- CEST
P297	<b>SARS-COV-2 INFECTION IMPACT ON PATIENTS WITH MULTIPLE SCLEROSIS AND NEUROMYELITIS SPECTRUM DISORDER IN A COLOMBIA COHORT</b> <i>Speaker:</i> Maria Zuluaga, CO	- CEST
P298	<b>Influence of cardiovascular risk factors in early relapsing remitting multiple sclerosis</b> <i>Speaker:</i> Pablo Arroyo-Pereiro, ES	- CEST
P299	<b>Covid19 in a Neuroimmunology and Multiple Sclerosis referral Unit</b> <i>Speaker:</i> Marina González del Río, ES	- CEST
P300	<b>MS Disease Activity Following Initiation of Dupilumab for Dyshidrotic Eczema: Case Report</b> <i>Speaker:</i> Lawrence Samkoff, US	- CEST
P301	<b>Incidence and predisposing factors of Covid-19 in patients living with multiple sclerosis: Results from a prospective</b>	- CEST

**multiple sclerosis cohort***Speaker:* Cavid Baba, TR*Poster Session*

16:45 - 18:45 CEST

**eP24 - ePoster - Neurobiology**

- P391      **Evaluating the Effect of BTK Inhibitor Tolebrutinib in Human Microglia**      - CEST  
*Speaker:* Ross Gruber, US
- P392      **Microfibril-associated protein 4 (MFAP4) as a biomarker for disease activity of optic neuritis associated-inflammatory demyelinating diseases.**      - CEST  
*Speaker:* Mads Nikolaj Olesen, DK
- P393      **Hippocampal subfields in RRMS: the modulatory role of gender, fatigue and depression**      - CEST  
*Speaker:* Damiano Mistri, IT
- P394      **Sex specific changes of mechanical properties of the mouse brain in experimental autoimmune encephalomyelitis**      - CEST  
*Speaker:* Clara Sophie Batzdorf, DE

*Poster Session*

16:45 - 18:45 CEST

**eP10 - ePoster - Pregnancy in MS**

- P168      **Estimating risk of disease reactivation during and after pregnancy in multiple sclerosis: the VIMS-Preg score**      - CEST  
*Speaker:* Gabriel Bsteh, AT
- P169      **Online Education Significantly Improves Knowledge and Competence in Managing Pregnancy in MS Patients Based on New Clinical Data**      - CEST  
*Speaker:* S Christy Rohani-Montez, GB
- P170      **Drug and neurofilament levels in women with multiple sclerosis treated with natalizumab during pregnancy and lactation**      - CEST  
*Speaker:* Undine Proschmann, DE
- P171      **Offspring outcomes among breastfeeding mothers on glatiramer acetate treatment for relapsing multiple sclerosis: subgroup analysis**      - CEST  
*Speaker:* Andrea I Ciplea, DE
- P172      **Pregnancy in women with MS – impact on long-term disability in a Danish cohort**      - CEST  
*Speaker:* Johanna Balslev Andersen, DK
- P173      **COPP-MS: Corticosteroids during the Post-Partum in relapsing Multiple Sclerosis patients**      - CEST  
*Speaker:* Soizic Leguy, FR
- P174      **Hypogammaglobulinemia during and after pregnancy in women**      - CEST

	<b>with MS treated with rituximab prior to conception</b>	
	<i>Speaker:</i> Chiara Starvaggi Cucuzza, SE	
P175	<b>Pregnancy Outcomes Following Exposure to Dimethyl Fumarate: Interim Analysis of a Prospective International Registry</b>	- CEST
	<i>Speaker:</i> Kerstin Hellwig, DE	
P176	<b>Pregnancy outcomes and peripartum disease activity in moderately and severely disabled women with MS</b>	- CEST
	<i>Speaker:</i> Bridget Ostrem, US	
P177	<b>Pregnancy-related outcomes in persons with MS exposed to teriflunomide</b>	- CEST
	<i>Speaker:</i> Johanna Balslev Andersen, DK	
P178	<b>Disease Modifying Therapy and Pregnancy Outcomes in Multiple Sclerosis: A Systematic Review and Meta-Analysis</b>	- CEST
	<i>Speaker:</i> Shitiz Sriwastava, US	
P179	<b>Pregnancy and foetal outcomes and breastfeeding practices following maternal exposure to glatiramer acetate</b>	- CEST
	<i>Speaker:</i> Sigal Kaplan, IL	
P180	<b>The association between female infertility and multiple sclerosis – a matched cohort study</b>	- CEST
	<i>Speaker:</i> Tine Iskov Kopp, DK	
P181	<b>Peri-Partum MRI Activity in Multiple Sclerosis: Interim Analysis from PREG-MS Cohort</b>	- CEST
	<i>Speaker:</i> Preksha Kukreja, US	
P182	<b>DeMeTeR: <u>D</u>isease <u>M</u>odifying <u>T</u>herapies and disease activity during pregnancy and postpartum in <u>R</u>elapsing Multiple Sclerosis</b>	- CEST
	<i>Speaker:</i> Lescot Lucile, FR	
P183	<b>A history of pregnancy reduces methylation age acceleration in women with relapse-onset multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Maria Pia Campagna, AU	
P184	<b>Fetal growth, neonatal anthropometric parameters, and post-natal somatic development in offsprings from MS mothers</b>	- CEST
	<i>Speaker:</i> Paola Cavalla, IT	
P185	<b>A Multi-Country Cohort Database Study to Assess Pregnancy and Infant Outcomes in Women Exposed to Cladribine Tablets: CLEAR Study</b>	- CEST
	<i>Speaker:</i> Kerstin Hellwig, DE	
P186	<b>Brain MRI activity during the year before pregnancy can predict post-partum clinical relapses</b>	- CEST
	<i>Speaker:</i> Omri Zveik, IL	

## Scientific program

## Poster Session

16:45 - 18:45 CEST

**eP20 - ePoster - Genetics/Epigenetics**

- P330 **A genome-wide association study of plasma neurofilament light levels in multiple sclerosis** - CEST  
*Speaker:* Thomas Moridi, SE
- P331 **Stronger together: Machine Learning accurately predicts multiple sclerosis severity where genome-wide association fails** - CEST  
*Speaker:* Vilija G. Jokubaitis, AU
- P332 **Back to the roots - from Phenotype to Genotype in Monozygotic Twins discordant for Multiple Sclerosis** - CEST  
*Speaker:* Claudia Janoschka, DE
- P333 **Differentially regulated pathways by endogenous vitamin D in multiple sclerosis identified by transcriptomics of immune cell subsets** - CEST  
*Speaker:* Wei Yeh, AU
- P334 **Multiple sclerosis risk variants influence the B cell composition early in life: a population-based study in children** - CEST  
*Speaker:* Louk de Mol, NL
- P335 **Impact of mitochondrial genome variability in features of multiple sclerosis onset** - CEST  
*Speaker:* Maxim Kozin, RU

## Poster Session

16:45 - 18:45 CEST

**eP30 - ePoster - Other Biomarkers**

- P610 **Longitudinal Analysis of Corneal Axonal Loss and Brain Atrophy in Multiple Sclerosis** - CEST  
*Speaker:* Dhabia Al-Merekhi, QA
- P611 **Postural stability provides additional clinical value as a disability metric compared with brain atrophy in progressive multiple sclerosis.** - CEST  
*Speaker:* Siew Mei Yap, IE
- P612 **Sensor-based gait analyses identify qualitative improvement in gait parameters after short-time rehabilitation in a Norwegian MS rehabilitation unit** - CEST  
*Speaker:* Pål Berg-Hansen, NO
- P613 **Microstates in Multiple Sclerosis: an electrophysiological signature of altered hubs functioning?** - CEST  
*Speaker:* Arianna Sartori, IT
- P614 **B and T cell immunity in MS with anti-CD20 therapy: Gene expression and protein profiles** - CEST  
*Speaker:* Anthony Reder, US

## Scientific program

P615	<b>Insights into the disconnection patterns in MS by multimodal assessment of structural and functional damage</b> <i>Speaker:</i> Serena Ruggieri, IT	- CEST
P616	<b>Myeloid-Derived Suppressor Cells are biomarkers of milder relapses in a murine model of Relapsing Remitting Multiple Sclerosis</b> <i>Speaker:</i> Celia Camacho-Toledano, ES	- CEST
P617	<b>Differing Pattern of Corneal Axonal Loss in Multiple Sclerosis: a Longitudinal Study</b> <i>Speaker:</i> Muhammad Hassan Rehman, QA	- CEST
P618	<b>Longitudinal Analysis of Corneal Immune Cells in Multiple Sclerosis</b> <i>Speaker:</i> Karen John, QA	- CEST
P619	<b>Longitudinal Analysis of Central Corneal Axonal Loss in Multiple Sclerosis</b> <i>Speaker:</i> Fatima Al-Shibani, QA	- CEST
P620	<b>Clinical predictors of positive autoantibody screening in chronic inflammatory CNS diseases</b> <i>Speaker:</i> Ilya Ayzenberg, DE	- CEST
P621	<b>Identification and Investigation of Novel Peripheral Blood Biomarkers Using scRNA-Seq and 21-color Flow Cytometry for Prediction of Disease Activity, Disease Progression and Treatment Response in Multiple Sclerosis</b> <i>Speaker:</i> Karine Thai, CA	- CEST
P622	<b>Oral teriflunomide effect on visual function in multiple sclerosis: multifocal electroretinogram responses after 12 months of treatment</b> <i>Speaker:</i> Anna Camos-Carreras, ES	- CEST
P623	<b>Ipsilateral silent period is associated with the ability of the box and block test in patients with multiple sclerosis</b> <i>Speaker:</i> Matthias Grothe, DE	- CEST
P624	<b>Assessing cognitive impairment in Multiple Sclerosis using Smartphone-Based training games: Results of a feasibility study</b> <i>Speaker:</i> Silvan Pless, CH	- CEST
P625	<b>The cognition in MS patients is related to the redox state of the plasma</b> <i>Speaker:</i> Anna Gil, ES	- CEST

## Poster Session

16:45 - 18:45 CEST

**eP21 - ePoster - Immunology**

P336	<b>T cell reactivity screening reveals four novel CNS autoantigens in multiple sclerosis</b>	16:45 - 16:45 CEST
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	<i>Speaker:</i> Mattias Bronge, SE	
P337	<b>Towards the suppression of the disease-relevant brain-homing T cell in multiple sclerosis</b> <i>Speaker:</i> Steven Koetzier, NL	16:45 - 16:45 CEST
P338	<b>Exosomes from MS subjects express EBV-derived proteins and activate monocyte-derived macrophages</b> <i>Speaker:</i> Samia Khoury, LB	16:45 - 16:45 CEST
P339	<b>The role of B cell-derived IL-10 in regulation of chronic CNS inflammation</b> <i>Speaker:</i> Darius Häusler, DE	16:45 - 16:45 CEST
P340	<b>Astrocytes pre-exposed to CSF from multiple sclerosis patients with inflammatory phenotype exhibit a specific reactive phenotype and induce neuronal dysfunction</b> <i>Speaker:</i> Clara Matute-Blanch, ES	16:45 - 16:45 CEST
P341	<b>Impact of B-cell depleting treatments on development of humoral and cellular immunological memory against SARS-CoV-2</b> <i>Speaker:</i> Klara Asplund Högelin, SE	16:45 - 16:45 CEST
P342	<b>Deficient response of blood neutrophils to cell death stimuli differentiates AQP4-IgG seropositive NMOSD from MOGAD patients</b> <i>Speaker:</i> María Schroeder-Castagno, DE	16:45 - 16:45 CEST
P343	<b>Haematopoietic stem cell transplantation for Multiple Sclerosis results in deletion of auto-reactive public CD4+ T-cell clones.</b> <i>Speaker:</i> Jennifer Massey, AU	16:45 - 16:45 CEST
P344	<b>Mucosal associated invariant T (MAIT) cells show defective activation in people with Multiple Sclerosis</b> <i>Speaker:</i> Laura Ghezzi, US	16:45 - 16:45 CEST
P345	<b>CSF albumin quotients links peripheral inflammation and brain damage in MS</b> <i>Speaker:</i> Marco Puthenparampil, IT	16:45 - 16:45 CEST
P346	<b>Therapeutic depletion of proinflammatory CD20<sup>+</sup> T cells in CNS inflammation</b> <i>Speaker:</i> Jasmin Ochs, DE	16:45 - 16:45 CEST
P347	<b>No evidence of rebound MS disease activity with presence of CD20<sup>+</sup> T cells at B-cell reconstitution after treatment with rituximab</b> <i>Speaker:</i> Nicolas Ruffin, SE	16:45 - 16:45 CEST
P348	<b>Association of allelic variants of IL2, IL2RA, and IL7R genes in a computational model of the role of thymic control in the pathogenesis of multiple sclerosis</b> <i>Speaker:</i> João Marcos Brandet, BR	16:45 - 16:45 CEST
P349	<b>CD46-dependent activation of T cells from untreated MS</b>	16:45 - 16:45



	<b>patients</b> <i>Speaker:</i> Linda Sundvall, DK	CEST
P350	<b>STAT3 / miR223 axis regulates myeloid cell activation in multiple sclerosis</b> <i>Speaker:</i> Claudia Cantoni, US	16:45 - 16:45 CEST
P351	<b>The impact of disease activity and genetics on T-cell repertoire in multiple sclerosis patients</b> <i>Speaker:</i> Melissa Sorosina, IT	16:45 - 16:45 CEST
P352	<b>Investigation of vitamin D signaling via the glucocorticosteroid receptor</b> <i>Speaker:</i> Maud Bagnoud, CH	16:45 - 16:45 CEST
P353	<b>The role of IgG antibodies as biomarkers in Relapsing-Remitting Multiple Sclerosis</b> <i>Speaker:</i> Maria Hadjiagapiou, CY	16:45 - 16:45 CEST
P354	<b>Transcriptomic characterization of CD11c<sup>+</sup>CD88<sup>+</sup>CD317<sup>+</sup> myeloid cells in CNS autoimmune disease</b> <i>Speaker:</i> Navid Manouchehri, US	16:45 - 16:45 CEST
P355	<b>Mitochondrial functionality of peripheral blood mononuclear cells of relapsing-remitting multiple sclerosis patients depending on the presence of lipid-specific oligoclonal immunoglobulin M bands in cerebrospinal fluid</b> <i>Speaker:</i> Roberto Alvarez-Lafuente, ES	16:45 - 16:45 CEST
P356	<b>Comprehensive phenotypic and functional analyses of peripheral blood monocytes during MS disease progression</b> <i>Speaker:</i> Ellen Iacobaeus, SE	16:45 - 16:45 CEST
P357	<b>Diversity of immune cell subsets across the blood and central nervous system's immune compartment of mice with experimental autoimmune encephalomyelitis</b> <i>Speaker:</i> Rina Zilkha-Falb, IL	16:45 - 16:45 CEST
P358	<b>Functional Properties of CD56<sup>+</sup>CD20 Natural Killer Cells and Their Relationship with Demyelinating Disorders</b> <i>Speaker:</i> Özgür Albayrak, TR	16:45 - 16:45 CEST
P359	<b>Ponesimod demonstrated increased clinical benefit over teriflunomide in early disease subgroup compared with overall population</b> <i>Speaker:</i> Maria Ait-Tihyaty, US	16:45 - 16:45 CEST
P360	<b>Multiple Sclerosis and The Presence of Unrecognized Immune Deficiencies: A Cross Sectional Analysis</b> <i>Speaker:</i> Olivia Kaczmarek, US	16:45 - 16:45 CEST
P361	<b>Genome-wide mapping of patient autoantibody targets to understand and predict multiple sclerosis pathogenesis and patient responses to interferon beta-1a therapy</b> <i>Speaker:</i> Europe B. DiCillo, US	16:45 - 16:45 CEST

## Scientific program

P362	<b>A human iPSC-derived CNS platform to investigate T cell autoreactivity in multiple sclerosis</b> <i>Speaker:</i> Sylvain Perriot, CH	16:45 - 16:45 CEST
P363	<b>Multiple Sclerosis, Natalizumab, Immunoglobulin Levels: A Longitudinal Analysis</b> <i>Speaker:</i> Olivia Kaczmarek, US	16:45 - 16:45 CEST
P364	<b>HLA-DRB1 susceptibility in multiple sclerosis Algerian patients</b> <i>Speaker:</i> Nassima Hecham, DZ	16:45 - 16:45 CEST
P365	<b>Investigating polymorphism of the 3'untranslated region (3'UTR) of the HLA-G by computational chemistry methods</b> <i>Speaker:</i> João Marcos Brandet, BR	16:45 - 16:45 CEST
P366	<b>Profound alterations on T cell subsets and on regulatory cells characterize Multiple Sclerosis at clinical onset</b> <i>Speaker:</i> Joao Canto-Gomes, PT	16:45 - 16:45 CEST
P367	<b>Flow Cytometric Assays to Quantify immunological subsets distribution in Patients with Multiple Sclerosis at disease onset: a case-control study</b> <i>Speaker:</i> Emanuele D'Amico, IT	16:45 - 16:45 CEST
P368	<b>Multiple Sclerosis, Quantitative MRI Imaging, Immune Profile: Exploration of A Potential Relationship Between Brain Atrophy and IgG Sub-class Profiles in a Population of People with Multiple Sclerosis</b> <i>Speaker:</i> Olivia Kaczmarek, US	16:45 - 16:45 CEST
P369	<b>Main role of antibodies in demyelination and axonal damage in Multiple Sclerosis</b> <i>Speaker:</i> Úrsula Muñoz, ES	16:45 - 16:45 CEST
P370	<b>The role of D<sub>2</sub>-like dopaminergic receptor in dopamine-mediated modulation of Th17-cells in multiple sclerosis.</b> <i>Speaker:</i> Mikhail Melnikov, RU	16:45 - 16:45 CEST

## Poster Session

16:45 - 18:45 CEST

**eP22 - ePoster - Microbiology and virology**

P371	<b>Case Report of 5 Kaiser Permanente Northern California Members Diagnosed with CIS or RRMS With Initial Clinical Relapse Less Than 2 Weeks after a COVID19 mRNA Vaccine</b> <i>Speaker:</i> Jacqueline Marcus, US	- CEST
P372	<b>IMU-838, a Small Molecule DHODH Inhibitor in Phase II Clinical Trial for Multiple Sclerosis, Shows Potent Anti-EBV Activity in Cell-Culture-Based Systems: Potential Additional Benefits in Multiple Sclerosis Treatment</b> <i>Speaker:</i> Manfred Marschall, DE	- CEST
P373	<b>CHITINASE-3-LIKE 1 AND ANTIVIRAL SEROLOGY IN PRIMARY PROGRESSIVE AND RELAPSING REMITTING MULTIPLE</b>	- CEST

**SCLEROSIS PATIENTS***Speaker:* Roberto Alvarez-Lafuente, ES

- P374 **pHERV-W ENV/syncytin-1 expression in relapsing-remitting and primary progressive multiple sclerosis patients and healthy controls: differences and possible viral transactivation** - CEST  
*Speaker:* Roberto Alvarez-Lafuente, ES
- P375 **SHORT CHAIN FATTY ACIDS IN SERUM AND CSF SAMPLES OF PATIENTS WITH MULTIPLE SCLEROSIS AND OTHER NEUROLOGICAL DISEASES: CORRELATION WITH CLINICAL DATA AND THE ANTIVIRAL RESPONSE** - CEST  
*Speaker:* Roberto Alvarez-Lafuente, ES

*Poster Session*

16:45 - 18:45 CEST

**eP23 - ePoster - Environmental factors**

- P376 **Factors affecting the risk of relapsing- and progressive-onset multiple sclerosis** - CEST  
*Speaker:* Tomas Olsson, SE
- P377 **DRB1-environment interactions in multiple sclerosis etiology; results from two Swedish case-control studies** - CEST  
*Speaker:* Lars Alfredsson, SE
- P378 **Epstein-Barr Virus infection and serum neurofilament light chain levels before MS onset** - CEST  
*Speaker:* Kjetil Bjornevik, US
- P379 **The impact of PM2.5 on Covid-19 severity among Italian MS patients.** - CEST  
*Speaker:* Marta Ponzano, IT
- P380 **Association between Exposome and Subsequent Multiple Sclerosis Outcomes** - CEST  
*Speaker:* Shruthi Venkatesh, US
- P381 **Mediterranean diet consumption predicts better objective and patient-reported function in multiple sclerosis** - CEST  
*Speaker:* Ilana Katz Sand, US
- P382 **Smoking and Epstein-Barr virus infection in multiple sclerosis development** - CEST  
*Speaker:* Lars Alfredsson, SE
- P383 **High levels of Epstein-Barr virus nuclear antigen-1 specific antibodies and infectious mononucleosis act both independently and synergistically to increase multiple sclerosis risk** - CEST  
*Speaker:* Tomas Olsson, SE
- P384 **Obesity and aspects of Epstein-Barr virus infection in multiple sclerosis etiology** - CEST  
*Speaker:* Tomas Olsson, SE

## Scientific program

P385	<b>Low fish consumption is associated with a small increased risk for multiple sclerosis</b> <i>Speaker:</i> Lars Alfredsson, SE	- CEST
P386	<b>Smoking, infectious mononucleosis, early-life exposures and risk of progressive-onset Multiple Sclerosis: a case-control study</b> <i>Speaker:</i> Ying Li, AU	- CEST
P387	<b>Developing a tool to assess environmental exposures in the Italian pediatric-onset multiple sclerosis (PEQ-IT).</b> <i>Speaker:</i> Silvy Pilotto, IT	- CEST
P388	<b>Using Bayesian networks to understand multiple sclerosis risk factor interactions</b> <i>Speaker:</i> Morghan Hartmann, GB	- CEST
P389	<b>Cytomegalovirus but not Epstein Barr Virus antibody titers are related to brain atrophy in a cohort of Multiple Sclerosis patients.</b> <i>Speaker:</i> Evelin Sabrina Heck, AR	- CEST
P390	<b>Determining the effect of sun exposure and physical activity on the incidence of primary progressive multiple sclerosis</b> <i>Speaker:</i> Sajjad Ghane Ezabadi, IR	- CEST

## Poster Session

16:45 - 18:45 CEST

**eP28 - ePoster - OCT**

P542	<b>Optical Coherence Tomography Demonstrates More Severe Peripapillary Retinal Nerve Fiber Layer Thickening in Acute Optic Neuritis from Myelin Oligodendrocyte Glycoprotein Antibody Associated Disorder than Multiple Sclerosis</b> <i>Speaker:</i> John Chen, US	- CEST
P543	<b>Microglia activation in the inner retina associates and predicts brain inflammatory disease activity in Multiple Sclerosis.</b> <i>Speaker:</i> Marta Pengo, IT	- CEST
P544	<b>Differences in age-related retinal and cortical atrophy rates in multiple sclerosis</b> <i>Speaker:</i> Christian Cordano, US	- CEST
P545	<b>Siponimod preserves retinal thickness, a marker of neurodegeneration, in patients with SPMS: Findings from the EXPAND OCT substudy</b> <i>Speaker:</i> Patrick Vermersch, FR	- CEST
P546	<b>Effects of myopia on longitudinal changes of retinal layer thicknesses in multiple sclerosis measured by optical coherence tomography</b> <i>Speaker:</i> Grigorios Kalaitzidis, US	- CEST
P547	<b>Occurrence of Peripapillary Hyper-Reflective Ovoid Masslike</b>	- CEST

	<b>Structures in patients with relapsing remitting and primary progressive Multiple Sclerosis</b>	
	<i>Speaker:</i> Rebecca Wicklein, DE	
P548	<b>Retinal vessel loss indicates disability and grey matter atrophy in patients with relapsing remitting multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Eva Feodora Romahn, DE	
P549	<b>Retinal thickness by optic coherence tomography and the risk of cognitive decline in patients with multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Elisabet Lopez-Soley, ES	
P550	<b>The performance of Optical Coherence Tomography in secondary progressive multiple sclerosis: results from the MS-SMART trial</b>	- CEST
	<i>Speaker:</i> Floriana De Angelis, GB	
P551	<b>Absence of astrocytic outer retinal layer thinning in AQP4-IgG seropositive neuromyelitis optica spectrum disorders</b>	- CEST
	<i>Speaker:</i> Angelo Lu, DE	
P552	<b>Retinal layer thinning after optic neuritis as a predictor of future relapse remission in relapsing multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Gabriel Bsteh, AT	
P553	<b>Structural visual metrics associate with moderate to vigorous physical activity in youth with pediatric-onset neuroinflammatory disorders</b>	- CEST
	<i>Speaker:</i> Juweiriya Ahmed, CA	
P554	<b>Retinal OCT as a biomarker of conversion to SPMS: a prospective longitudinal study</b>	- CEST
	<i>Speaker:</i> Hadi Sabbagh, LB	
P555	<b>Ganglion cell-inner plexiform layer is a marker of brain neuronal loss in multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Alessandro Cagol, CH	
P556	<b>CNS involvement in chronic inflammatory demyelinating polyneuropathy: subtle retinal changes in optical coherence tomography</b>	- CEST
	<i>Speaker:</i> Jens Ingwersen, DE	
P557	<b>Investigating the relationship between clinical disability, retinal integrity, and choroid plexus volume in relapsing-remitting multiple sclerosis patients</b>	- CEST
	<i>Speaker:</i> Madeline Bross, US	
P558	<b>Retinal nerve fiber layer as a biomarker of axonal damage in multiple sclerosis patients using machine learning techniques</b>	- CEST
	<i>Speaker:</i> Alberto Montolío, ES	
P559	<b>RETINAL DEGENERATION IN MYELIN OLIGODENDROCYTE GLYCOPROTEIN-ASSOCIATED DISEASE: A SINGLE CENTRE ITALIAN STUDY</b>	- CEST

	<i>Speaker:</i> Eleonora Rigoni, IT	
P560	<b>Association of the retinal vasculature and intrathecal immunity during relapsing remitting multiple sclerosis</b> <i>Speaker:</i> Christina Noll, DE	- CEST
P561	<b>Effect of ocrelizumab treatment on retinal atrophy: preliminary results from a single-center prospective observational study</b> <i>Speaker:</i> Maria Cellerino, IT	- CEST
P562	<b>Defining subclinical optic neuritis: Optical Coherence Tomography calls for MRI</b> <i>Speaker:</i> Marco Puthenparampil, IT	- CEST
P563	<b>Optical Coherence Tomography in Primary Progressive Multiple Sclerosis: INL thinning as a possible biomarker of response to Ocrelizumab</b> <i>Speaker:</i> Alessandro Miscioscia, IT	- CEST
P564	<b>Spectral-domain optical coherence tomography assessment in treatment-naive patients with clinically isolated syndrome and different multiple sclerosis types: findings and relationship with the disability status.</b> <i>Speaker:</i> ?ukasz Rzepi?ski, PL	- CEST

*Poster Session*

16:45 - 18:45 CEST

**eP34 - ePoster - Risk management for disease modifying treatments**

P756	<b>Risk of Cancer with Disease-Modifying Drugs in Multiple Sclerosis: A New-User Cohort Design in the French Nationwide Claims Database</b> <i>Speaker:</i> Meritxell Sabidó, DE	- CEST
P757	<b>Personalized B-cell tailored dosing of ocrelizumab in patients with multiple sclerosis during the COVID-19 pandemic</b> <i>Speaker:</i> Zoë Yolenthe Germieke Jocelyn van Lierop, NL	- CEST
P758	<b>Transitioning from S1P receptor modulators to B-cell depleting therapies in multiple sclerosis: Clinical, radiographic and laboratory data</b> <i>Speaker:</i> William Rowles, US	- CEST
P759	<b>INCREASED RISK OF DEATH FROM COVID-19 IN MULTIPLE SCLEROSIS: A META-ANALYSIS OF OBSERVATIONAL STUDIES</b> <i>Speaker:</i> Luca Prosperini, IT	- CEST
P760	<b>Rituximab treatment prior to pregnancy in women with multiple sclerosis – perinatal outcomes in Swedish cohort</b> <i>Speaker:</i> Agnes Gorczyca, SE	- CEST
P761	<b>Outpatient Infections, Multiple Sclerosis and Disease-Modifying Therapies</b> <i>Speaker:</i> Annette Langer-Gould, US	- CEST

P762	<b>Ocrelizumab-related Neutropenia: Effects of age, sex and bodyweight using the FDA Adverse Event Reporting System (FAERS)</b> <i>Speaker:</i> Helly Hammer, CH	- CEST
P763	<b>Effect of Total Body Weight and Body Mass Index on Lymphocyte Counts in Scottish Multiple Sclerosis Patients Treated with Cladribine</b> <i>Speaker:</i> Elizabeth Phuong My Phan, GB	- CEST
P764	<b>Can induction of autoimmune antibodies after alemtuzumab treatment of multiple sclerosis predict secondary autoimmunity?</b> <i>Speaker:</i> Sofia Sandgren, SE	- CEST
P765	<b>Anti-CD20 therapies decrease humoral immune response to SARS-CoV-2 in patients with multiple sclerosis or neuromyelitis optica spectrum disorders</b> <i>Speaker:</i> Michella Ibrahim, LB	- CEST
P766	<b>Post-Approval Safety of Cladribine Tablets With Particular Reference to COVID-19 Outcomes: An Update</b> <i>Speaker:</i> Gavin Giovannoni, GB	- CEST
P767	<b>Incidence of Infections and Severe Lymphopenia in Patients Newly Initiating Cladribine Tablets or Fingolimod for Treatment of Multiple Sclerosis: CLARION Study</b> <i>Speaker:</i> Jan Hillert, SE	- CEST
P768	<b>Persistence of seroprotective titers of antibodies against HBV and VZV in MS patients</b> <i>Speaker:</i> Filipa Ladeira, PT	- CEST
P769	<b>Safety of Natalizumab reinfusion during active Sars-Cov-2 infection in patients with Multiple Sclerosis</b> <i>Speaker:</i> Doriana Landi, IT	- CEST
P770	<b>Malignancies risk in patients with immunosuppressive treatment</b> <i>Speaker:</i> Judit Díaz-Díaz, ES	- CEST
P771	<b>Antibody response to SARS-CoV2 vaccination in people with multiple sclerosis</b> <i>Speaker:</i> Sammita Satyanarayan, US	- CEST
P772	<b>Ocrelizumab attenuates the humoral response to SARS-CoV-2 compared with other disease modifying therapies in multiple sclerosis: a case-control study</b> <i>Speaker:</i> William Conte, US	- CEST
P773	<b>Blood pressure excursions with alemtuzumab in Canadian patients with relapsing remitting multiple sclerosis</b> <i>Speaker:</i> Sarah Morrow, CA	- CEST
P774	<b>Comparison of perceived and actual risks of progressive</b>	- CEST

	<b>multifocal encephalopathy in patients treated with natalizumab at a single centre</b>	
	<i>Speaker:</i> Rachel Dorsey-Campbell, GB	
P775	<b>Persistent lymphopenia after dimethyl fumarate and fingolimod treatment</b>	- CEST
	<i>Speaker:</i> Isabel Hernández, ES	
P776	<b>ACAPELLA: Hypogammaglobulinemia and JCV status in Ocrelizumab-Treated Patients, Year Four Data</b>	- CEST
	<i>Speaker:</i> Elizabeth Douglas, US	
P777	<b>Design and Rationale for an Open-label Multicenter Phase 4 Study Assessing Immune Response to COVID-19 Vaccine in Patients With Relapsing Multiple Sclerosis Treated With Ofatumumab</b>	- CEST
	<i>Speaker:</i> Tanuja Chitnis, US	
P778	<b>Management of Hepatitis B virus infection prophylaxis in patients treated with disease modifying therapies for multiple sclerosis: a multicentric Italian retrospective study.</b>	- CEST
	<i>Speaker:</i> Roberta Lanzillo, IT	
P779	<b>Management of intravenous therapy for MS during COVID-19 pandemic</b>	- CEST
	<i>Speaker:</i> Judit Díaz-Díaz, ES	
P780	<b>Effect of cladribine on COVID-19 serology responses following 2 doses of the BNT162b2 mRNA vaccine in patients with multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Ariel Rechtman, IL	
P781	<b>MS patients treated with natalizumab have a positive serology response to SARS-CoV-2 S1/S2 following vaccination with two doses of mRNA COVID-19 vaccine.</b>	- CEST
	<i>Speaker:</i> Ariel Rechtman, IL	
P782	<b>Vaccinations in patients with multiple sclerosis: a real-world, single-center, experience</b>	- CEST
	<i>Speaker:</i> Elvira Sbragia, IT	
P783	<b>COVID-19 infections and vaccinations in the Swiss Multiple Sclerosis Cohort Study</b>	- CEST
	<i>Speaker:</i> Varenka Epple, CH	
P784	<b>Is multiple sclerosis knowledge related to medication adherence?</b>	- CEST
	<i>Speaker:</i> Edward Smith, GB	
P785	<b>A Disease Modifying Therapy Panel for Multiple Sclerosis: Experience of the first 2 years.</b>	- CEST
	<i>Speaker:</i> Jon McKee, GB	
P786	<b>IMPACT OF COVID-19 IN IMMUNOSUPPRESSED CHILDREN WITH NEUROIMMUNOLOGIC DISORDERS</b>	- CEST



	<i>Speaker:</i> Gemma Olivé-Cirera, ES	
P787	<b>One year of natalizumab extended interval dosing: what have we learned</b> <i>Speaker:</i> Catarina Bernardes, PT	- CEST
P788	<b>Infections and multiple sclerosis : recommendations from the French Multiple Sclerosis Society.</b> <i>Speaker:</i> Caroline Papeix, FR	- CEST
P789	<b>Evaluating the Efficacy and Safety of Transitioning Patients from Natalizumab to Ocrelizumab</b> <i>Speaker:</i> Kyle Smoot, US	- CEST
P790	<b>Observational Study of a Novel Peri-infusion Regimen on the Infusion-Associated Reactions With Alemtuzumab in Patients With MS in a Canadian Clinical Setting</b> <i>Speaker:</i> Richard Leckey, CA	- CEST
P791	<b>Prospectively stratifying Infectious Risks In Multiple Sclerosis – first results of the InRIMS study</b> <i>Speaker:</i> Martin Diebold, DE	- CEST
P792	<b>Fulminant Neurosyphilis with Abscess formation post-ocrelizumab in a patient with Relapsing Remitting Multiple Sclerosis</b> <i>Speaker:</i> Sina Marzoughi, CA	- CEST
P793	<b>Evaluation of Tolebrutinib Animal Embryo-Foetal Developmental Data Indicates Low Risk During Pregnancy</b> <i>Speaker:</i> Lynn B Davenport, US	- CEST
P794	<b>INFORM – Interferon beta Exposure in the 2<sup>nd</sup> and 3<sup>rd</sup> Trimester of Pregnancy - a Register-Based Drug Utilisation Study in Finland and Sweden</b> <i>Speaker:</i> Meritxell Sabidó, DE	- CEST
P795	<b>ACAPELLA: Real-World Experience with Ocrelizumab: An Observational Study Evaluating Safety in Patients with Relapsing and Progressive MS, Year Four Data</b> <i>Speaker:</i> Elizabeth Douglas, US	- CEST
<i>Poster Session</i>		
16:45 - 18:45 CEST		
<b>eP25 - ePoster - Neurodegeneration</b>		
P395	<b>Investigating the effects of diabetes mellitus and hypertension on retinal layer thickness in patients with multiple sclerosis</b> <i>Speaker:</i> Vince Marceau, US	- CEST
P396	<b>Advanced diffusion-weighted imaging models better characterize white matter neurodegeneration and clinical outcomes in multiple sclerosis</b> <i>Speaker:</i> Loredana Storelli, IT	- CEST

## Scientific program

P397	<b>MRI predictors of upper cervical cord grey matter atrophy in multiple sclerosis patients</b> <i>Speaker:</i> Raffaello Bonacchi, IT	- CEST
P398	<b>Chronic demyelination-induced cell senescence is responsible for motor impairment in a model of MS</b> <i>Speaker:</i> Irimi Papazian, GR	- CEST
P399	<b>Molecular Mechanisms of Tauopathy Upon Demyelination Process: Is Neurotoxic Cis p-tau One of the Central Mediators in MS Development?</b> <i>Speaker:</i> Seyed Massood Nabavi, IR	- CEST

## Poster Session

16:45 - 18:45 CEST

**eP41 - ePoster - Others**

P894	<b>Acute demyelinating events triggered by COVID-19 Vaccines: case series</b> <i>Speaker:</i> Valentina Camera, IT	16:45 - 16:45 CEST
P895	<b>The wearing-off phenomenon of ocrelizumab in patients with multiple sclerosis</b> <i>Speaker:</i> A.A. Toorop, NL	16:45 - 16:45 CEST
P896	<b>COVID-19 vaccination and humoral immune response in people with multiple sclerosis</b> <i>Speaker:</i> Celia Oreja-Guevara, ES	16:45 - 16:45 CEST
P898	<b>Prescribing trends of MS disease modifying therapies during the COVID-19 pandemic: Analysis of NHS England prescriptions and comparison with international trends</b> <i>Speaker:</i> Afagh Garjani, GB	16:45 - 16:45 CEST
P899	<b>Effect of cladribine on differentiation of human neural precursor cells</b> <i>Speaker:</i> Herena Eixarch, ES	16:45 - 16:45 CEST
P900	<b>COVID-19 vaccination and acute disseminated encephalomyelitis - case report</b> <i>Speaker:</i> Wojciech Ambrosius, PL	16:45 - 16:45 CEST
P901	<b>The symptoms, clinical characteristics and hospital outcomes of multiple sclerosis patients admitted for COVID-19; A case-control study from Iran</b> <i>Speaker:</i> Maryam Poursadeghfard, IR	16:45 - 16:45 CEST
P902	<b>Empowerment of multiple sclerosis patients in treatment decision making</b> <i>Speaker:</i> Michele Cole, US	16:45 - 16:45 CEST
P903	<b>Interprofessional collaboration and patient-provider communication challenges in MS care: A mixed-methods needs assessment</b> <i>Speaker:</i> Sophie Péloquin, CA	16:45 - 16:45 CEST

P904	<b>A qualitative exploration of recruitment issues for MS research regarding patient participants and healthcare practitioner facilitation: Three studies within the COB-MS trial</b> <i>Speaker:</i> Christopher Dwyer, IE	16:45 - 16:45 CEST
P905	<b>Treatment patterns in patients with multiple sclerosis: a single hospital cohort study in Sweden</b> <i>Speaker:</i> Anna Castelo-Branco, SE	16:45 - 16:45 CEST
P906	<b>Autologous haematopoietic stem cell transplantation of patients with aggressive relapsing-remitting multiple sclerosis: A Danish single-centre experience</b> <i>Speaker:</i> Freja Jespersen, DK	16:45 - 16:45 CEST
P907	<b>Pandemia in the life of persons with MS in Italy</b> <i>Speaker:</i> Daiana Bezzini, IT	16:45 - 16:45 CEST
P908	<b>The role of disease modifying therapies in rate and severity of COVID-19 infection in a cohort of MS and NMOSD</b> <i>Speaker:</i> Massood Nabavi, IR	16:45 - 16:45 CEST
P909	<b>Impact of an educational program on the DMF persistence in real-life: TECFIRELIFE study</b> <i>Speaker:</i> Kevin Bigaut, FR	16:45 - 16:45 CEST
P910	<b>Analysis and evaluation of ponesimod hepatic safety data</b> <i>Speaker:</i> Andrea Vaclavkova, CH	16:45 - 16:45 CEST
P911	<b>First experiences of the master's program "Multiple Sclerosis Management" (MSM) at the Dresden International University (DIU)</b> <i>Speaker:</i> Isabel Voigt, DE	16:45 - 16:45 CEST
P912	<b>Prospective online survey: SARS-CoV-2 vaccination readiness in People with MS</b> <i>Speaker:</i> Anna-Lena Röper, DE	16:45 - 16:45 CEST
P913	<b>Estimating the long-term clinical and societal outcomes of ofatumumab compared with teriflunomide and evaluating the impact of immediate vs delayed high efficacy therapy in treating patients with relapsing multiple sclerosis in Spain</b> <i>Speaker:</i> Umakanth Vudumula, IE	16:45 - 16:45 CEST
P914	<b>Network meta-analysis of disease-modifying therapies for relapsing multiple sclerosis based on confirmed disability progression: Investigating the influence of cross-trial differences in endpoint definition</b> <i>Speaker:</i> Dee Stoneman, CH	16:45 - 16:45 CEST
P915	<b>Effect of Self-acupressure on Fatigue Among Patients with Multiple Sclerosis</b> <i>Speaker:</i> Kubra Yeni, TR	16:45 - 16:45 CEST
P916	<b>Multiple Sclerosis patients and the COVID -19 pandemic</b> <i>Speaker:</i> Ana Maria Canzonieri, BR	16:45 - 16:45 CEST

## Scientific program

P917	<b>Two cases of dystonic reactions following initiation of ofatumumab</b> <i>Speaker:</i> Huiam Mubarak, US	16:45 - 16:45 CEST
P918	<b>Quantitative Understanding of the Longitudinal Relationship between Short-term MRI outcomes and Long-term Clinical Outcomes Measures in Multiple Sclerosis</b> <i>Speaker:</i> Matthew Wiens, US	16:45 - 16:45 CEST
P919	<b>Relapse reduction by disease-modifying therapies for relapsing multiple sclerosis: A network meta-analysis</b> <i>Speaker:</i> Dee Stoneman, CH	16:45 - 16:45 CEST
P920	<b>First-hand experience with ofatumumab at ASCLEPIOS study sites in Europe</b> <i>Speaker:</i> Carola Wagner, DE	16:45 - 16:45 CEST
P921	<b>LOW DOSE CANNABIDIOL (CBD) TREATMENT PROVIDED SUCCESSFUL CONTROL OF INTRACTABLE SEIZURES IN SECONDARY PROGRESSIVE MULTIPLE SCLEROSIS PATIENT: A CASE REPORT</b> <i>Speaker:</i> Hakan Silek, TR	16:45 - 16:45 CEST

## Poster Session

16:45 - 18:45 CEST

**eP27 - eposter - MRI & PET**

P404	<b>Machine Learning-based Prediction of New Multiple Sclerosis Lesion Formation Using Radiomic Features From Pre-lesion Normal-Appearing White Matter</b> <i>Speaker:</i> Bastien Caba, FR	16:45 - 16:45 CEST
P405	<b>Decreased neuroaxonal integrity in early relapse onset multiple sclerosis is associated with long-term disability at 15 years</b> <i>Speaker:</i> Nevin A John, GB	16:45 - 16:45 CEST
P406	<b>Decreased functional dynamics of thalamocortical states in cognitively impaired multiple sclerosis patients</b> <i>Speaker:</i> Stefanos Enricos Prouskas, NL	16:45 - 16:45 CEST
P407	<b>Long-term suppression of MRI disease activity and reduction of global/regional volume loss: results from OPERA I/II and ORATORIO open-label extension</b> <i>Speaker:</i> Douglas L Arnold, CA	16:45 - 16:45 CEST
P408	<b>Defining the Spinal Cord Reserve Concept in Multiple Sclerosis - Measurement and Association with Disability of the Spinal Cord Canal Area</b> <i>Speaker:</i> Jaume Sastre-Garriga, ES	16:45 - 16:45 CEST
P409	<b>Brain disconnectome mapping and axonal damage in multiple sclerosis: A prospective longitudinal multicenter study employing brain MRI and serum neurofilament light level</b> <i>Speaker:</i> Einar August Høgestøl, NO	16:45 - 16:45 CEST

## Scientific program

P410	<b>Myelin heterogeneity index is sensitive to longitudinal myelin changes in multiple sclerosis</b> <i>Speaker:</i> Poljanka Johnson, CA	16:45 - 16:45 CEST
P411	<b>A brain white matter atlas of probabilistic lesion distribution in all forms of multiple sclerosis</b> <i>Speaker:</i> Colm Elliott, CA	16:45 - 16:45 CEST
P412	<b>T<sub>1</sub> relaxometry abnormalities in white matter tracts predict functional systems scores in MS</b> <i>Speaker:</i> Veronica Ravano, CH	16:45 - 16:45 CEST
P413	<b>Cognitive diagnostic criteria lead to distinct patterns of functional connectivity in Secondary Progressive MS.</b> <i>Speaker:</i> Anisha Doshi, GB	16:45 - 16:45 CEST
P414	<b>Spinal Cord Anterior Horn Atrophy: A New Biomarker in Progressive Multiple Sclerosis</b> <i>Speaker:</i> Charidimos Tsagkas, CH	16:45 - 16:45 CEST
P415	<b>Spinal cord imaging markers and disease progression in MS</b> <i>Speaker:</i> Matthias Bussas, DE	16:45 - 16:45 CEST
P416	<b>Predicting disability progression with patterns of white matter and grey matter changes in secondary progressive multiple sclerosis using standardised T1w/T2w maps</b> <i>Speaker:</i> Elisa Colato, GB	16:45 - 16:45 CEST
P417	<b>Spinal cord lesions and brain grey matter atrophy independently predict clinical worsening in multiple sclerosis: a 5-year, multicentre study</b> <i>Speaker:</i> Maria Assunta Rocca, IT	16:45 - 16:45 CEST
P418	<b>Atrophy quantification in multiple sclerosis: application to the multicenter INNI dataset</b> <i>Speaker:</i> Loredana Storelli, IT	16:45 - 16:45 CEST
P419	<b>Early prediction of CAL evolution from newly developing MS lesions using 7T MRI</b> <i>Speaker:</i> Matthew K. Schindler, US	16:45 - 16:45 CEST
P420	<b>Hypothalamic Subregional Volumes are Associated with Fatigue, Depression, and Sleep Disturbance in a Large Cohort of Patients with Multiple Sclerosis</b> <i>Speaker:</i> Lindsay Ross MD, US	16:45 - 16:45 CEST
P421	<b>Software-dependent effects of physiological changes on GM and WM volumes: implications for interpretation of brain atrophy rates in MS</b> <i>Speaker:</i> Marco Battaglini, IT	16:45 - 16:45 CEST
P422	<b>Hippocampal atrophy is relevant to memory deficits in early Relapsing Remitting MS patients</b> <i>Speaker:</i> Ludovico Luchetti, IT	16:45 - 16:45 CEST
P423	<b>Investigating Microstructural Changes in White Matter in</b>	16:45 - 16:45

	<b>Multiple Sclerosis: A Systematic Review and Individual Participant Data Meta-analysis of Neurite Orientation Dispersion and Density Imaging.</b>	CEST
	<i>Speaker:</i> Abdulmajeed Alotaibi, GB	
P424	<b>MEM<sub>FC</sub>: A summary metric of memory network functional connectivity alterations in MS</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Victoria Leavitt, US	
P425	<b>Histopathological validation of artificial double inversion recovery images for MR cortical lesion detection</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Piet M. Bouman, NL	
P426	<b>Associations of Disease Severity and Outcomes with MRI-based 'SuStain' Disease Subtypes in Secondary Progressive MS</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Arie Gafson, US	
P427	<b>Clinical impact of microstructural brain damage in Multiple Sclerosis: a qMRI study</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Maria Petracca, US	
P428	<b>Evaluating DMT escalation based on isolated MRI activity</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Katharina Riedl, AT	
P429	<b>Using the Central Vein Sign and Diffusion MRI to differentiate demyelinating from lesions due to small vessel disease in Multiple Sclerosis</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Caterina Lapucci, IT	
P430	<b>Development and Interrelation of Whole-Brain Atrophy and Lesion Volume During 5 Years' Treatment With Subcutaneous Interferon Beta-1a in Patients With a First Clinical Demyelinating Event in the REFLEX/ION Study</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Rozemarijn M Mattiesing, NL	
P431	<b>Global network properties in microstructure-weighted connectomes are altered in cognitive impaired patients</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Antonia L. Wenger, CH	
P432	<b>Detecting Brain Gadolinium retention in MS with MRI: A comparison of 2D Spin Echo, 3D Gradient Echo, Quantitative Susceptibility Mapping and Magnetization Transfer</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Carmen Cananau, SE	
P433	<b>Paramagnetic rims in treatment naïve persons around the time of multiple sclerosis diagnosis</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Margareta Clarke, US	
P434	<b>Decoupling of structural and functional connectivity towards progressive MS is related to cognitive impairment but not disability</b>	16:45 - 16:45 CEST
	<i>Speaker:</i> Maureen van Dam, NL	
P435	<b>Spatial features of brain demyelinating lesions as prognostic factors in the clinically isolated syndrome</b>	16:45 - 16:45 CEST

	<i>Speaker:</i> Lucia Coll, ES	
P436	<b>Altered functional brain states predict cognitive deficits 5 years after a clinically isolated syndrome</b> <i>Speaker:</i> Ismail Koubiyr, FR	16:45 - 16:45 CEST
P437	<b>Restriction spectrum imaging in multiple sclerosis: an advanced MRI diffusion case-control study and a multi-site harmonization.</b> <i>Speaker:</i> Daniel A. Rinker, NO	16:45 - 16:45 CEST
P438	<b>Multimodal imaging with <sup>11</sup>C-PBR28 MR-PET and Synthetic MRI reveals a direct association between activated microglia and myelin content in the MS brain white matter</b> <i>Speaker:</i> Valeria Barletta, US	16:45 - 16:45 CEST
P439	<b>Sensitivity of Ultra-Low-Field Magnetic Resonance Imaging for White Matter Lesions and Leptomeningeal Enhancement in Multiple Sclerosis</b> <i>Speaker:</i> Serhat V. Okar, US	16:45 - 16:45 CEST
P440	<b>Clinical relevance of multiparametric MRI assessment of cerebellar damage in multiple sclerosis</b> <i>Speaker:</i> Raffaello Bonacchi, IT	16:45 - 16:45 CEST
P441	<b>7T MRI leptomeningeal enhancement and brain atrophy are associated with alterations in the IL-23 metabolic pathway in patients with multiple sclerosis</b> <i>Speaker:</i> Jonathan Zurawski, US	16:45 - 16:45 CEST
P442	<b>CORTICAL LESIONS DETECTED WITH 7T MRI ARE ASSOCIATED WITH DISRUPTION OF LOCAL CORTICAL FUNCTION AND AREA SPECIFIC SYMPTOMS</b> <i>Speaker:</i> Mads Alexander Just Madsen, DK	16:45 - 16:45 CEST
P443	<b>Multimodal quantitative and semiquantitative MRI assessment of cortical grey matter demyelination: a neuropathology-MRI study</b> <i>Speaker:</i> Agnese Tamanti, IT	16:45 - 16:45 CEST
P444	<b>Medulla oblongata atrophy as a possible biomarker for neurodegeneration in early relapsing multiple sclerosis</b> <i>Speaker:</i> Laura Sander, CH	16:45 - 16:45 CEST
P445	<b>Modern machine learning algorithm to unveil the relationship between different types of multiple sclerosis lesions and cortical atrophy</b> <i>Speaker:</i> Constantina Treaba, US	16:45 - 16:45 CEST
P446	<b>Machine Learning-based Detection of Slowly Expanding Lesions using Radiomic Features from Cross-sectional Brain MRI</b> <i>Speaker:</i> Bastien Caba, FR	16:45 - 16:45 CEST
P447	<b>Multiple Sclerosis Lesion Burden Estimates Using Portable Ultra-Low-Field Magnetic Resonance Imaging</b>	16:45 - 16:45 CEST

	<i>Speaker:</i> T. Campbell Arnold, US	
P448	<b>Long Term Myelin Water Imaging in treated Relapsing Remitting MS Patients</b> <i>Speaker:</i> Caroline Koehler, DE	16:45 - 16:45 CEST
P449	<b>Patterns of Disease-Related Cortical and Subcortical Grey Matter in Early Relapsing-Remitting Multiple Sclerosis</b> <i>Speaker:</i> Sarah Levy, US	16:45 - 16:45 CEST
P450	<b>Accelerated brain aging in multiple sclerosis: A large multicentre study harmonizing structural imaging data across scanners and site</b> <i>Speaker:</i> Einar August Høgestøl, NO	16:45 - 16:45 CEST
P451	<b>Leptomeningeal inflammation in multiple sclerosis and other neurological diseases – a systematic review and meta-analysis</b> <i>Speaker:</i> Benjamin V. Ineichen, SE	16:45 - 16:45 CEST
P452	<b>Could cerebral autoregulatory collapse explain cognitive impairment in MS?</b> <i>Speaker:</i> Dinesh Sivakolundu, US	16:45 - 16:45 CEST
P453	<b>Structural network alterations in inferomedial temporal regions distinguishing relapsing-remitting multiple sclerosis from neuromyelitis optica spectrum disorder</b> <i>Speaker:</i> Eun Bin Cho, KR	16:45 - 16:45 CEST
P454	<b>Diffusely abnormal white matter in clinically isolated syndrome is associated with parenchymal loss and elevated neurofilament levels</b> <i>Speaker:</i> Irene M. Vavasour, CA	16:45 - 16:45 CEST
P455	<b>Disentangling cortical lesions properties with multi-shell diffusion, quantitative T1, Magnetization Transfer, and Myelin Water Imaging</b> <i>Speaker:</i> Muhamed Barakovic, CH	16:45 - 16:45 CEST
P456	<b>The relation of Sarcopenia and Disability in Multiple Sclerosis</b> <i>Speaker:</i> Lukas Haider, GB	16:45 - 16:45 CEST
P457	<b>q-Space Myelin Map imaging for longitudinal analysis of remyelination in multiple sclerosis patients treated with dimethyl fumarate, follow-up results</b> <i>Speaker:</i> Kenji Kufukihara, JP	16:45 - 16:45 CEST
P458	<b>Development and Interrelation of Spatiotemporal Patterns of Brain Atrophy and Lesions During 5 Years' Treatment With Subcutaneous Interferon Beta-1a in Patients With a First Clinical Demyelinating Event in the REFLEX/ION Study</b> <i>Speaker:</i> Giordano Gentile, IT	16:45 - 16:45 CEST
P459	<b>Posterior and Attentional network functional connectivity changes predict cognitive impairment in Secondary Progressive MS.</b>	16:45 - 16:45 CEST



	<i>Speaker:</i> Anisha Doshi, GB	
P460	<b>Quantitative Spinal Cord MRI as a Biomarker of Treatment Response to Dimethyl Fumarate in MS</b> <i>Speaker:</i> Heejun Kang, CA	16:45 - 16:45 CEST
P461	<b>An assessment of intra-scanner reproducibility of myelin-sensitive MRI measures</b> <i>Speaker:</i> Reza Rahmzadeh, CH	16:45 - 16:45 CEST
P462	<b>Thalamic glutamate concentrations relate to cognitive functioning in multiple sclerosis</b> <i>Speaker:</i> Marijn Huiskamp, NL	16:45 - 16:45 CEST
P463	<b>Applying multilayer analysis into morphological, structural and functional brain networks in Multiple Sclerosis</b> <i>Speaker:</i> Jordi Casas-Roma, ES	16:45 - 16:45 CEST
P464	<b>Structural Connectivity Measures in Cognitively Impaired People with Multiple Sclerosis Following Cognitive Rehabilitation</b> <i>Speaker:</i> Joana Frieske, ES	16:45 - 16:45 CEST
P465	<b>Cortical Lesion Detection using FLAWS in Multiple Sclerosis</b> <i>Speaker:</i> Jannis Müller, CH	16:45 - 16:45 CEST
P466	<b>Neuroinflammation and neurodegeneration in MS at age 53: Descriptions from a birth cohort.</b> <i>Speaker:</i> Lodewijk Reinier Johannes De Ruyter, NL	16:45 - 16:45 CEST
P467	<b>Defining the clinical radiological paradox using quantitative performance and MRI metrics.</b> <i>Speaker:</i> Daniel Ontaneda, US	16:45 - 16:45 CEST
P468	<b>Regional analysis of atrophy in multiple sclerosis in a large multicenter dataset</b> <i>Speaker:</i> Elisabetta Pagani, IT	16:45 - 16:45 CEST
P469	<b>Improved assessment of longitudinal spinal cord atrophy in multiple sclerosis using a registration-based approach: relevance for clinical studies</b> <i>Speaker:</i> Paola Valsasina, IT	16:45 - 16:45 CEST
P470	<b>Cognitive phenotypes and their associated MRI patterns</b> <i>Speaker:</i> Piet M. Bouman, NL	16:45 - 16:45 CEST
P471	<b>Network alterations underlying anxiety symptoms in early multiple sclerosis</b> <i>Speaker:</i> Erik Ellwardt, DE	16:45 - 16:45 CEST
P472	<b>NODDI enables detection of subtle WM changes that lead to thalamic atrophy in subjects with RRMS</b> <i>Speaker:</i> Merline Maria Weeda, NL	16:45 - 16:45 CEST
P473	<b>Choroid plexus are enlarged and inflamed in clinically-defined and pre-symptomatic multiple sclerosis: 3T MRI and</b>	16:45 - 16:45 CEST

	<b>translocator protein PET study</b> <i>Speaker:</i> Vito Antonio Gerardo Ricigliano, FR	
P474	<b>Clinical longitudinal study of iron rim in white matter lesions in MS</b> <i>Speaker:</i> Amjad Altokhis, GB	16:45 - 16:45 CEST
P475	<b>Automated Central Vein Sign Detection for the Diagnosis of Multiple Sclerosis – A Multi-Center Validation Study</b> <i>Speaker:</i> Abigail R Manning, US	16:45 - 16:45 CEST
P476	<b>Lesion-level morphological features on 3T imaging accurately predict multiple sclerosis diagnosis</b> <i>Speaker:</i> Carolyn Lou, US	16:45 - 16:45 CEST
P477	<b>Improved standardisation of T1w/FLAIR ratio to evaluate myelin integrity in MS patients</b> <i>Speaker:</i> Sarah Cappelle, BE	16:45 - 16:45 CEST
P478	<b>Clinical, radiological and quantitative imaging analysis reveals distinct subgroups in the antibody-negative neuromyelitis optica/multiple sclerosis overlap cohort</b> <i>Speaker:</i> Maciej Jurynczyk, GB	16:45 - 16:45 CEST
P479	<b>MRI enlarged perivascular spaces in MS</b> <i>Speaker:</i> Pietro Maggi, BE	16:45 - 16:45 CEST
P480	<b>Slowly evolving lesions showed less myelin content than non-slowly evolving lesions: insights from a substudy of OPERA II</b> <i>Speaker:</i> Shannon Kolind, CA	16:45 - 16:45 CEST
P481	<b>Multi-modal quantitative MRI of brain and spinal cord microstructure using matched sequences improves predictions of clinical disability in MS</b> <i>Speaker:</i> Carmen Tur, GB	16:45 - 16:45 CEST
P482	<b>Leptomeningeal enhancement under different immunotherapies – a monocentric retrospective cohort study of 215 patients</b> <i>Speaker:</i> Christoph Friedli, CH	16:45 - 16:45 CEST
P483	<b>MRI correlates of apathy in Multiple Sclerosis: a clinical-radiological study</b> <i>Speaker:</i> Francesco Tazza, IT	16:45 - 16:45 CEST
P484	<b>Contribution of tissue inflammation and blood-brain barrier disruption to brain softening in a mouse model of multiple sclerosis</b> <i>Speaker:</i> Rafaela Silva, DE	16:45 - 16:45 CEST
P485	<b>Estimation of the spinal cord area from brain and spine MRI studies. Agreement of the measures obtained with the Spinal Cord Toolbox.</b> <i>Speaker:</i> Deborah Pareto, ES	16:45 - 16:45 CEST
P486	<b>Fully Automatic Method for State-of-the-Art Spinal Cord Compartment Segmentation in Multiple Sclerosis</b>	16:45 - 16:45 CEST

	<i>Speaker:</i> Charidimos Tsagkas, CH	
P487	<b>MS-specific deep learning segmentation of deep gray matter</b> <i>Speaker:</i> Hugo Vrenken, NL	16:45 - 16:45 CEST
P488	<b>The effect of dimethyl fumarate on white matter integrity and cognitive functioning 6-18 months after initiation of treatment in patients with relapsing-remitting multiple sclerosis.</b> <i>Speaker:</i> Marike R. van Lingen, NL	16:45 - 16:45 CEST
P489	<b>Cortical diffusion abnormalities in multiple sclerosis and their correlation with cortical volume and white matter hyperintensities in the UK Biobank Imaging Study?</b> <i>Speaker:</i> Steven A Chance, GB	16:45 - 16:45 CEST
P490	<b>Development of a brain venography algorithm using susceptibility-weighted images</b> <i>Speaker:</i> Francesc Xavier Aymerich, ES	16:45 - 16:45 CEST
P491	<b>Paramagnetic rim and central vein sign as complementary biomarkers in MS</b> <i>Speaker:</i> Tim Robert-Fitzgerald, US	16:45 - 16:45 CEST
P493	<b>Automated Brain MRI Assessments for Monitoring MS Activity in Routine Practice</b> <i>Speaker:</i> Hagen H Kitzler, DE	16:45 - 16:45 CEST
P494	<b>Dynamic Functional Connectivity Between the Cerebellum and Dorsolateral Prefrontal Cortex Explains Variability in Memory Ability in Multiple Sclerosis</b> <i>Speaker:</i> Mark Zuppichini, US	16:45 - 16:45 CEST
P495	<b>The histopathological characteristics of the central vein sign in multiple sclerosis lesions</b> <i>Speaker:</i> Sargis Manukyan, US	16:45 - 16:45 CEST
P496	<b>Impact of teriflunomide on innate immune cell activation in RRMS patients with limited signs of CNS pathology</b> <i>Speaker:</i> Taruliina Parkkali, FI	16:45 - 16:45 CEST
P497	<b>Reliability of template or atlas-based corticospinal tracts compared to individual tract segmentations at 7T for the assessment of motor disability</b> <i>Speaker:</i> Vanessa Wiggermann, DK	16:45 - 16:45 CEST
P498	<b>Volatile thalamic network configuration in patients with multiple sclerosis</b> <i>Speaker:</i> Nina von Schwanenflug, DE	16:45 - 16:45 CEST
P499	<b>LEMAN-PV AS A CLINICAL DECISION-SUPPORT TOOL TO ASSESS MS ACTIVITY: A MULTICENTRIC LONGITUDINAL STUDY AT 1.5T AND 3T MRI</b> <i>Speaker:</i> Ramona-Alexandra Todea, CH	16:45 - 16:45 CEST
P500	<b>CLaiMS-Net: cortical lesions assessment in multiple sclerosis patients via a convolutional neural network and a single 3T MRI</b>	16:45 - 16:45 CEST

	<b>acquisition</b> <i>Speaker:</i> Francesco La Rosa, CH	
P501	<b>The vital role of Neuroradiology input in the management of patients with multiple sclerosis</b> <i>Speaker:</i> Stephen Ramsay, GB	16:45 - 16:45 CEST
P502	<b>Automated detection of cortical lesions with single and multi-contrast 7T MRI</b> <i>Speaker:</i> Francesco La Rosa, CH	16:45 - 16:45 CEST
P503	<b>Development and validation of a simple and practical tool for differentiating MS from other Idiopathic Inflammatory Demyelinating Diseases of CNS with brain MRI</b> <i>Speaker:</i> Jasmin Patel, US	16:45 - 16:45 CEST
P504	<b>Post-mortem correlates of Virchow-Robin Spaces detected on in-vivo MRI</b> <i>Speaker:</i> Lukas Haider, GB	16:45 - 16:45 CEST
P505	<b>Practical Issues concerning the use of Magnetic Resonance Imaging in Multiple Sclerosis in Latin America</b> <i>Speaker:</i> Ethel Ciampi, CL	16:45 - 16:45 CEST
P506	<b>Toward fully automated assessment of the central vein sign using deep learning</b> <i>Speaker:</i> Till Huelnhagen, CH	16:45 - 16:45 CEST
P507	<b>Standardized T1/T2 ratio predicts ongoing pathological damage in Multiple Sclerosis patients under natalizumab therapy</b> <i>Speaker:</i> Maria Petracca, US	16:45 - 16:45 CEST
P508	<b>Investigating the impact of slowly expanding lesions (SEL) on normal appearing grey matter (NAGM) and normal appearing white matter (NAWM) seen in advanced MRI in Multiple sclerosis (MS) patients.</b> <i>Speaker:</i> Samiksha Srivastava, US	16:45 - 16:45 CEST
P509	<b>The clinical relevance of whole brain atrophy patterns in patients with longstanding multiple sclerosis</b> <i>Speaker:</i> Samantha Noteboom, NL	16:45 - 16:45 CEST
P510	<b>Dissociation between brain atrophy and lesion burden in patients with multiple sclerosis: a new definition</b> <i>Speaker:</i> Tomas Uher, CZ	16:45 - 16:45 CEST
P511	<b>Structure-function coupling of long-range connections in the theta band relates to cognitive impairment in multiple sclerosis</b> <i>Speaker:</i> Menno M. Schoonheim, NL	16:45 - 16:45 CEST
P512	<b>Central vein sign is associated with relapse risk in multiple sclerosis: a 3-year longitudinal study</b> <i>Speaker:</i> Omar Al-Louzi, US	16:45 - 16:45 CEST
P513	<b>Periventricular gradients of T<sub>1</sub> z-scores correlate with disability in early Multiple sclerosis</b>	16:45 - 16:45 CEST

	<i>Speaker:</i> Manuela Vaneckova, CZ	
P514	<b>Whole brain axonal diameter mapping unveils increased vulnerability of frontal lobe normal appearing white matter in multiple sclerosis</b> <i>Speaker:</i> Silvia De Santis, ES	16:45 - 16:45 CEST
P515	<b>Microstructural white matter damage in the cerebellum is related to cognitive impairment in patients with Relapsing-Remitting Multiple Sclerosis: a 3T MRI study.</b> <i>Speaker:</i> Elisabetta Mancuso, IT	16:45 - 16:45 CEST
P516	<b>The role of brain network functional connectivity and machine learning for the classification and characterization of disease phenotypes in patients with multiple sclerosis</b> <i>Speaker:</i> Paola Valsasina, IT	16:45 - 16:45 CEST
P517	<b>The effect of Gadolinium-based contrast-agents on automated atrophy measurements by FreeSurfer in patients with multiple sclerosis</b> <i>Speaker:</i> Ingrid Anne Lie, NO	16:45 - 16:45 CEST
P518	<b>Retrospective Case-Control Study of the Spinal Cord Grey and White Matter Changes in MS and NMO Using Routine Clinical MR Images</b> <i>Speaker:</i> Amba Margarete Frese, DE	16:45 - 16:45 CEST
P519	<b>Probing brain effective connectivity in early MS patients with Granger causality analysis of task-fMRI</b> <i>Speaker:</i> João Valente Duarte, PT	16:45 - 16:45 CEST
P520	<b>COMBINING MORPHOLOGICAL AND TOPOGRAPHIC CHARACTERISTICS OF WHITE MATTER LESIONS TO DIFFERENTIATE MULTIPLE SCLEROSIS FROM VASCULAR MIMICS</b> <i>Speaker:</i> Rosa Cortese, IT	16:45 - 16:45 CEST
P521	<b><sup>64</sup>Cu-FBP8 in vivo imaging of fibrin deposition in multiple sclerosis patients: initial data</b> <i>Speaker:</i> Constantina Treaba, US	16:45 - 16:45 CEST
P522	<b>Asymmetry of Magnetization Transfer Ratio (MTR) Measurements In the Cervical Spinal Cord of MS patients</b> <i>Speaker:</i> Soizic Leguy, FR	16:45 - 16:45 CEST
P523	<b>Implementation of a 3D convolutional network to predict impairment of multiple sclerosis subjects based on structural disconnection</b> <i>Speaker:</i> Emily Olafson, US	16:45 - 16:45 CEST
P524	<b>Evaluating the use and impact of Magnetic Resonance Imaging in the management of Multiple Sclerosis in Northern Ireland</b> <i>Speaker:</i> Stephen Ramsay, GB	16:45 - 16:45 CEST
P525	<b>Validation of an automated cervical spinal cord segmentation in brain MRI</b>	16:45 - 16:45 CEST

	<i>Speaker:</i> Manuela Van??ková, CZ	
P526	<b>Improved cortical, cervical cord and optic nerve lesion detection in Multiple Sclerosis with a prototype 3D Turbo Spin Echo MRI sequence for Double Inversion Recovery</b> <i>Speaker:</i> Mauro Costagli, IT	16:45 - 16:45 CEST
P527	<b>Using 3D Amide Proton Transfer imaging at 3T to investigate and characterize lesions and normal-appearing white matter in Multiple Sclerosis</b> <i>Speaker:</i> Ibrahim Khormi, AU	16:45 - 16:45 CEST
P528	<b>Quantitative T1-mapping of contrast-enhancing lesions in multiple sclerosis using Magnetic Resonance Fingerprinting</b> <i>Speaker:</i> Mauro Costagli, IT	16:45 - 16:45 CEST
P529	<b>Multiple Sclerosis or Fabry Disease? the Central Vein Sign as diagnostic aid</b> <i>Speaker:</i> Valentina Virginia Iuzzolino, IT	16:45 - 16:45 CEST
P530	<b>Chronic active MRI lesions in multiple sclerosis patients undergoing anti-CD20 antibody therapies</b> <i>Speaker:</i> Amina Sellimi, BE	16:45 - 16:45 CEST
P531	<b>Imaging features to distinguish AQP4-positive NMOSD and MS at disease onset: a retrospective analysis in a single-center cohort</b> <i>Speaker:</i> Tobias Zrzavy, AT	16:45 - 16:45 CEST
P532	<b>Whole-brain functional connectivity dynamics in mild and moderately affected patients with relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Amy Romanello, DE	16:45 - 16:45 CEST
P533	<b>Effect of ofatumumab on brain volume loss vs historical placebo in relapsing multiple sclerosis</b> <i>Speaker:</i> Bernd Kieseier, CH	16:45 - 16:45 CEST
P534	<b>In-vivo characterization of macro- and microstructural injury of the subventricular zone in multiple sclerosis</b> <i>Speaker:</i> Nicol? Bruschi, IT	16:45 - 16:45 CEST
P535	<b>Alterations in the microstructure of the normal-appearing white matter in the Corpus Callosum reflect distant focal damage in Relapsing-Remitting Multiple Sclerosis</b> <i>Speaker:</i> Lester Melie-Garcia, CH	16:45 - 16:45 CEST
P536	<b>Assessing the usability of synthetic images to improve the detection of new T2 lesions</b> <i>Speaker:</i> Liliana Valencia, ES	16:45 - 16:45 CEST
P537	<b>North American Imaging in Multiple Sclerosis Cooperative – Imaging Repository (NAIMS – IR)</b> <i>Speaker:</i> Anthony Traboulsee, CA	16:45 - 16:45 CEST
P538	<b>Lesion location in multiple sclerosis</b>	16:45 - 16:45

## Scientific program

	<i>Speaker:</i> Viola Pongratz, DE	CEST
P539	<b>Inter-scanner brain MRI volumetric biases persist in a harmonized multi-subject study of multiple sclerosis</b> <i>Speaker:</i> Kelly Clark, US	16:45 - 16:45 CEST
P540	<b>Changes in brain functional connectivity associated with impaired verbal memory in patients with early multiple sclerosis</b> <i>Speaker:</i> Joao Jose Cerqueira, PT	16:45 - 16:45 CEST
P541	<b>Baseline MRI predicts disability in relapsing multiple sclerosis: data from a nationwide registry in Argentina</b> <i>Speaker:</i> Javier Pablo Hryb, AR	16:45 - 16:45 CEST

## Poster Session

16:45 - 18:45 CEST

**eP03 - ePoster - MOGSD**

P053	<b>Heterogeneity of clinical presentations among patients with MOG-antibody associated disease</b> <i>Speaker:</i> Barbara Willekens, NL	- CEST
P054	<b>Demographic and clinical profile of patients with myelin oligodendrocyte glycoprotein antibody-associated disease in Chile</b> <i>Speaker:</i> Jorge Guzman, CL	- CEST
P055	<b>Prevalence, incidence, and seasonal distribution of onset of MOG antibody-associated disease in the province of Verona, Italy</b> <i>Speaker:</i> Riccardo Orlandi, IT	- CEST
P056	<b>Impact of COVID-19 Public Health Measures on Myelin Oligodendrocyte Glycoprotein IgG-Associated Disorders in Children</b> <i>Speaker:</i> Matsanga Leyila Kaseka, CA	- CEST
P057	<b>Clinical characteristics and response to treatment of patients with MOGAD: a multicenter case series.</b> <i>Speaker:</i> Hayet Boudjani, CA	- CEST
P058	<b>Cognitive impairment and depression are highly prevalent in MOG-IgG associated antibody disease</b> <i>Speaker:</i> Ann-Kathrin Kogel, DE	- CEST
P059	<b>Clinical and imaging predictors of MOG-antibody persistency in pediatric MOG-associated disorders</b> <i>Speaker:</i> Edgar Martinez Chavez, CA	- CEST
P060	<b>Absence of Attack-Independent Neuroaxonal Injury in MOG Antibody-Associated Disease: Longitudinal Analysis of Serum Neurofilament Light Chain</b> <i>Speaker:</i> Jae-Won Hyun, KR	- CEST
P061	<b>ACUTE DISSEMINATED ENCEPHALOMYELITIS REQUIRING DE</b>	- CEST

**COMPRESSIVE CRANIECTOMY AS INITIAL PRESENTATION OF MOG-ANTIBODY DISORDERS IN ADULTS***Speaker:* Alba Chavarria-Miranda, ES

P062 **Volumetric brain loss at diagnosis correlates with a relapsing MOGAD disease course** - CEST

*Speaker:* Ariel Rechtman, IL

P063 **Brain volume measures in adults with MOG-antibody associated disease: a longitudinal multicentre study** - CEST

*Speaker:* Riccardo Orlandi, IT*Poster Session*

16:45 - 18:45 CEST

**eP32 - ePoster - Neuroprotection and Repair**

P706 **Hydroxychloroquine is promising for neuroprotection in primary progressive MS: An open label, single arm, phase II futility trial.** - CEST

*Speaker:* Marcus Koch, CA

P707 **Transnasal delivery of anti-Nogo-A antibody improves disease symptoms in a mouse model of multiple sclerosis** - CEST

*Speaker:* Vincent Pernet, CH

P708 **Bexarotene treatment leads to durable improvements in visual evoked potential latency; a follow-up study of the Cambridge Centre for Myelin Repair trial One** - CEST

*Speaker:* Nick G Cunniffe, GB

P709 **Effect of Cladribine tablets in highly active MS monitored by global and regional brain atrophy status** - CEST

*Speaker:* Alaleh Raji, DE

P710 **Blockade of Bone Morphogenetic Protein-2/4 induces Oligodendrogenesis and Remyelination in inflammatory and toxic Demyelinating Disorders** - CEST

*Speaker:* Arnon Karni, IL

P711 **Extended neuroprotective efficacy of ACT-01 in the animal model of lysolecithin induced demyelination in optic nerve** - CEST

*Speaker:* Pablo Villoslada, ES

P712 **Ponesimod in CNS modulates astrocytic genes and protects against limbic fiber demyelination via S1P<sub>1</sub>-selective modulation** - CEST

*Speaker:* Jerold Chun, US

P713 **Synergistic effects of ACT-01 with dimethyl-fumarate or fingolimod for combination therapy in the EAE animal model of MS** - CEST

*Speaker:* Pablo Villoslada, ES

P714 **Phase 1 safety, tolerability and pharmacokinetics of ACT-01, a neuroprotective small molecule for the disease modifying treatment of Acute Optic Neuritis and MS** - CEST



	<i>Speaker:</i> Pablo Villoslada, ES	
P715	<b>????Amelioration of disease severity in therapeutic siponimod treatment of chronic experimental autoimmune encephalomyelitis is associated with a downregulation of microglial activity.</b> <i>Speaker:</i> Leila Husseini, DE	- CEST
P716	<b>Fingolimod efficacy improved by a CNS vitamin B<sub>12</sub> mechanism controlling neuroinflammatory genes</b> <i>Speaker:</i> Jerold Chun, US	- CEST
P717	<b>Analysis of RP-101074 protective capacities on retinal neurodegeneration and visual function in the non-inflammatory animal model of light-induced photoreceptor loss</b> <i>Speaker:</i> Christina Hecker, DE	- CEST
P718	<b>Siponimod protects retina and higher visual pathway in optic nerve injury model, through its direct modulatory actions on neuronal S1PR1</b> <i>Speaker:</i> Devaraj Basavarajappa, AU	- CEST
P719	<b>Acute Optic Neuritis as a clinical model to assess efficacy and safety of ACT-01, a novel neurotrophin-like molecule with potential for disease-modifying treatment</b> <i>Speaker:</i> Pablo Villoslada, ES	- CEST
P720	<b>Comparative assessment of effects of resveratrol and its nano-formulation on mesenchymal stem cells from patients with multiple sclerosis</b> <i>Speaker:</i> Arezoo Rajabian, IR	- CEST
P721	<b>Central versus peripheral drug exposure ratio, a key parameter for therapeutic efficacy of S1P receptor modulators in SPMS</b> <i>Speaker:</i> Marc Bigaud, CH	- CEST
 <i>Poster Session</i> 16:45 - 18:45 CEST		
<b>eP19 - ePoster - Experimental models</b>		
P321	<b>Characterization of a neuromyelitis optica mice model induced by AQP4 peptide immunization</b> <i>Speaker:</i> Kenichi Serizawa, JP	- CEST
P322	<b>Behavioral consequences of endocrine disruptors in a <i>Xenopus laevis</i> model of inducible-demyelination and myelin regeneration</b> <i>Speaker:</i> Bernard Zalc, FR	- CEST
P323	<b>Investigating the role of astrocytes for the survival of axons in chronic inflammatory lesions</b> <i>Speaker:</i> Luise Reukauf, DE	- CEST
P324	<b>Validation of a new animal model suitable for the investigation of mechanisms and potential therapeutic options of progressive</b>	- CEST

	<b>multiple sclerosis</b>	
	<i>Speaker:</i> Michaela Tanja Haindl, AT	
P325	<b>Vitamin D decreases demyelination and anxiety signs in an animal model resembling the cortical pathology of Multiple Sclerosis</b>	- CEST
	<i>Speaker:</i> Berenice Anabel Silva, AR	
P326	<b>Age-related changes in the CNS immune response and neuroregeneration in EAE</b>	- CEST
	<i>Speaker:</i> María Dema, ES	
P327	<b>Spinal cord grey matter demyelination in myelin oligodendrocyte glycoprotein-IgG and aquaporin 4-IgG augmented experimental autoimmune encephalomyelitis</b>	- CEST
	<i>Speaker:</i> Jana Remlinger, CH	
P328	<b>A novel approach to better understand phenotypic alterations in the <i>in vivo</i> model of Multiple Sclerosis at distinct mice age - improved Frailty Index scale</b>	- CEST
	<i>Speaker:</i> Ana Rita Ribeiro, PT	
P329	<b>Alterations in the expression of cardiac inwardly rectifying potassium channels are related to cardiovascular dysfunctions in a mouse model of multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Chiara Villa, IT	
<i>Poster Session</i>		
16:45 - 18:45 CEST		
<b>eP14 - ePoster - Economic burden</b>		
P272	<b>The UK Multiple Sclerosis Care Crisis: an audit of 70 services</b>	- CEST
	<i>Speaker:</i> Jeremy Hobart, GB	
P273	<b>Social Disparities in Access to Multiple Sclerosis Treatment in Mexico</b>	- CEST
	<i>Speaker:</i> Enrique Gomez-Figueroa, MX	
P274	<b>Economic impact and clinical profile of the Secondary Progressive Multiple Sclerosis (SPMS) patient: the DISCOVER study</b>	- CEST
	<i>Speaker:</i> Celia Oreja-Guevara, ES	
P275	<b>A cost-minimization analysis shows significant resource savings associated with the introduction of natalizumab by subcutaneous injection in Sweden, from a socio-economic perspective</b>	- CEST
	<i>Speaker:</i> Mattia Gianinazzi, CH	
P276	<b>The societal cost and burden of multiple sclerosis in Spain</b>	- CEST
	<i>Speaker:</i> Alice Bouleau, FR	
P277	<b>Socioeconomic Status and MS disease severity in Chile</b>	- CEST
	<i>Speaker:</i> Ethel Ciampi, CL	

## Scientific program

- P278 **A real-world study to assess the economic burden and clinical outcome in patients with relapsing-remitting multiple sclerosis treated with dimethyl fumarate in Greece** - CEST  
*Speaker:* George Karachalios, GR
- P279 **Out of pocket cost associated with Multiple Sclerosis Diagnosis and Management in a Rural neurology setting** - CEST  
*Speaker:* Muhammad Taimur Malik, US
- P280 **Economic Analysis for Introduction of Cladribine Tablets as a Treatment for Relapsing-Remitting and High Disease Activity Multiple Sclerosis in Kuwait** - CEST  
*Speaker:* Raed Alroughani, KW
- P281 **Cost-effectiveness of ofatumumab in comparison with other disease modifying therapies and best supportive care for the treatment of relapsing-remitting multiple sclerosis in Canada** - CEST  
*Speaker:* Soukaina Mouallif, CA

*Poster Session*

16:45 - 18:45 CEST

**eP40 - ePoster - Neurobiology & Rehabilitation**

- P893 **Interhemispheric substrates of clinical disability and upper limb motor function in multiple sclerosis patients: a structural and functional MRI study** - CEST  
*Speaker:* Claudio Cordani, IT

*Poster Session*

16:45 - 18:45 CEST

**eP37 - ePoster - RWE and MS registries**

- P815 **The effect of different national treatment strategies on disability outcome in relapsing-remitting multiple sclerosis: a propensity score adjusted comparison between Denmark and Sweden.** - CEST  
*Speaker:* Tim Spelman, AU
- P816 **Real-world effectiveness of alemtuzumab in RRMS patients in Germany: Interim results of the TREAT-MS study after completion of recruitment** - CEST  
*Speaker:* Tjalf Ziemssen, DE
- P817 **Anti-CD20 monoclonal antibodies in primary progressive multiple sclerosis. A real-life comparative study of rituximab vs. ocrelizumab.** - CEST  
*Speaker:* Carlos Quintanilla-Bordás, ES
- P818 **Disease reactivation after cessation of disease-modifying therapy in relapsing-remitting multiple sclerosis** - CEST  
*Speaker:* Izanne Roos, AU
- P819 **Comparative analysis of Dimethyl Fumarate and Teriflunomide in Relapsing-Remitting Multiple Sclerosis** - CEST  
*Speaker:* Jannis Müller, CH

P820	<b>Ocrelizumab treatment in multiple sclerosis – A Danish population-based cohort study</b> <i>Speaker:</i> Luigi Pontieri, DK	- CEST
P821	<b>Trajectories of processing speed, disability, and their connections, over the years following disease modulatory treatment initiation among relapsing-remitting multiple sclerosis patients</b> <i>Speaker:</i> Elisa Longinetti, SE	- CEST
P822	<b>Anti-CD20 and natalizumab in highly active relapsing-remitting Multiple Sclerosis: the SWIFNA-20 comparative effectiveness Study.</b> <i>Speaker:</i> David Laplaud, FR	- CEST
P823	<b>The risk of Covid-19 in people with Multiple Sclerosis: a case-control study from the Italian MS Register</b> <i>Speaker:</i> Pietro Iaffaldano, IT	- CEST
P824	<b>NEDA3PLUS study: 48-week interim results on persistence, clinical and MRI outcomes in RRMS patients treated with teriflunomide in a real-world setting</b> <i>Speaker:</i> Maria Pia Amato, IT	- CEST
P825	<b>Real-world experience with Cladribine in the MSBase Registry</b> <i>Speaker:</i> Helmut Butzkueven, AU	- CEST
P826	<b>Disease activity and CD19+ B-cell counts with extended interval dosing of ocrelizumab</b> <i>Speaker:</i> Christopher Allen, GB	- CEST
P827	<b>Effectiveness and safety of early high-efficacy vs. escalation therapy in relapsing-remitting multiple sclerosis in Argentina</b> <i>Speaker:</i> Juan Ignacio Rojas, AR	- CEST
P828	<b>The effectiveness of ocrelizumab in real-world patients with relapsing multiple sclerosis over 18 months – interim analysis of the CONFIDENCE study</b> <i>Speaker:</i> Mathias Buttmann, DE	- CEST
P829	<b>Clinical Characteristics and Vitamin D Use in People with MS by Race and Ethnicity From the NARCRMS Registry</b> <i>Speaker:</i> Angel Chinea, PR	- CEST
P830	<b>Impact of the COVID-19 pandemic on healthcare utilisation in US people living with multiple sclerosis: an analysis of the FlywheelIMS cohort</b> <i>Speaker:</i> Kelly Zalocusky, US	- CEST
P831	<b>Inclusion of indications for start of disease-modifying therapies can improve predictive models used in comparative effectiveness studies in multiple sclerosis</b> <i>Speaker:</i> Alexandra Simpson, US	- CEST
P832	<b>Impact of the COVID-19 pandemic on healthcare access and</b>	- CEST

	<b>perceived outcomes: a survey study of people with MS in the United States.</b>	
	<i>Speaker:</i> Leorah Freeman, US	
P833	<b>Claims-based relapse and hospitalization rates in patients with multiple sclerosis treated with natalizumab or ocrelizumab</b>	- CEST
	<i>Speaker:</i> Jacqueline Nicholas, US	
P834	<b>Predictors of treatment switching in the Big MD Data Network</b>	- CEST
	<i>Speaker:</i> Tim Spelman, AU	
P835	<b>A multicentre audit of the use of MRI in Multiple Sclerosis</b>	- CEST
	<i>Speaker:</i> Christopher Allen, GB	
P836	<b>Anti-Spike IgG after BNT162b2 vaccine in a group of multiple sclerosis patients from an exploratory case-control study in Italy</b>	- CEST
	<i>Speaker:</i> Riccardo Giossi, IT	
P837	<b>Assessing the Impact of Fingolimod Adherence on Relapse and Costs Using Marginal Structural Models</b>	- CEST
	<i>Speaker:</i> Le H. Hua, US	
P838	<b>Multiple Sclerosis Patients Treated with Diroximel Fumarate Over 1 Year in the Real-World Setting have High Rates of Persistence and Adherence</b>	- CEST
	<i>Speaker:</i> Brittney Lager, US	
P839	<b>Ocrelizumab infusion delays and radiologic relapse in multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Jessica Fan, US	
P840	<b>Seasonal variation in relapses of multiple sclerosis and neuromyelitis optica spectrum disorders: A study from a nationwide registry in Argentina</b>	- CEST
	<i>Speaker:</i> Edgar Carnero Contentti, AR	
P841	<b>Impact of teleneurology care on multiple sclerosis outcomes</b>	- CEST
	<i>Speaker:</i> Marisa McGinley, US	
P842	<b>Two year relapse-free and NEDA status with Cladribine in a real life population: a multicentre study</b>	- CEST
	<i>Speaker:</i> Pietro Annovazzi, IT	
P843	<b>Therapeutic management of relapsing-remitting multiple sclerosis in France in the recent era</b>	- CEST
	<i>Speaker:</i> Emmanuelle Leray, FR	
P844	<b>Safety of COVID-19 Vaccines in Patients with Multiple Sclerosis from Latin America</b>	- CEST
	<i>Speaker:</i> Ricardo Alonso, AR	
P845	<b>Introducing a prototype tool to speed-up data cleaning and enhancement for improving the use of real-world MS</b>	- CEST
	<i>Speaker:</i> Tina Parciak, DE	

## Scientific program

P846	<b>Real world switching therapies analysis in a retro-prospective cohort of patients with multiple sclerosis</b> <i>Speaker:</i> Giulia Mallucci, IT	- CEST
P847	<b>High prevalence of intolerability with interferon beta and glatiramer acetate in patients with MS</b> <i>Speaker:</i> Jong-Mi Lee, US	- CEST
P848	<b>MS treatment profiles in Germany - insights from two major MS cohorts</b> <i>Speaker:</i> David Ellenberger, DE	- CEST
P849	<b>Fatigue, depression and health-related productivity in multiple sclerosis patients treated with teriflunomide for 2 years in the real-world study TeriCARE</b> <i>Speaker:</i> Ana Belén Caminero Rodríguez, ES	- CEST
P850	<b>Early Data Suggests Diroximel Fumarate has High Rates of Real-world Adherence and Persistence</b> <i>Speaker:</i> Nicholas Belviso, US	- CEST
P851	<b>MASTER-2 trial: Cladribine tablets in patients with relapsing-remitting multiple sclerosis and active secondary progressive multiple sclerosis after suboptimal response to prior infusion/oral disease-modifying therapy (interim baseline results)</b> <i>Speaker:</i> Edward Fox, US	- CEST
P852	<b>Real-world evidence of immune reconstitution therapies: use of Cladribine and Alemtuzumab in Chile</b> <i>Speaker:</i> Ethel Ciampi, CL	- CEST
P853	<b>Real world data from the argentine MS national registry of patients under cladribine</b> <i>Speaker:</i> Juan Ignacio Rojas, AR	- CEST
P854	<b>Teriflunomide Improves Quality of Life in a Greek Cohort of Relapsing-Remitting Multiple Sclerosis Patients Switched from Injectables: Subgroup Analysis of Previously-treated Patients in the AURELIO Study</b> <i>Speaker:</i> Efthymios Dardiotis, GR	- CEST
P855	<b>Vaccinations in MS by Race and Ethnicity from the NARCRMS Registry</b> <i>Speaker:</i> Kottil Rammohan, US	- CEST
P856	<b>Safety and clinical effectiveness of peginterferon beta-1a for relapsing multiple sclerosis: Plegridy Observational Program interim results</b> <i>Speaker:</i> Marco Salvetti, IT	- CEST
P857	<b>MS treatment in Slovenia over time</b> <i>Speaker:</i> Gregor Brecl Jakob, SI	- CEST
P858	<b>Effectiveness of Relapsing Multiple Sclerosis Patients</b>	- CEST

	<b>Switching to Teriflunomide Following Disease Progression in a Real-World Setting</b>	
	<i>Speaker:</i> Augusto Miravalle, US	
P859	<b>Evaluation of therapy satisfaction with cladribine tablets in RMS patients – Final results of the non-interventional study CLEVER</b>	- CEST
	<i>Speaker:</i> Joachim Richter, DE	
P860	<b>Relapse during the washout period predicts time to relapse after switching to cladribine</b>	- CEST
	<i>Speaker:</i> Michael Zhong, AU	
P861	<b>Interferon beta for the treatment of multiple sclerosis in the Campania Region of Italy: merging the real-life to routinely collected healthcare data</b>	- CEST
	<i>Speaker:</i> Marcello Moccia, GB	
P862	<b>Impact of Informative Follow-Up Visits on Comparative Effectiveness in Multiple Sclerosis: Illustrations and Insights from Real World Data</b>	- CEST
	<i>Speaker:</i> Paramita Saha-Chaudhuri, US	
P863	<b>Patient-Reported Outcomes to Assess Quality of Life in Teriflunomide-treated Patients with Relapsing-Remitting Multiple Sclerosis: Results of Teri-REAL – a Real-World Study from Hungary</b>	- CEST
	<i>Speaker:</i> László Vécsei, HU	
P864	<b>Novel Generation of Real World Evidence through MSGo, a Digital Support Program Supporting the Use of Siponimod in Secondary Progressive Multiple Sclerosis Patients in Australia</b>	- CEST
	<i>Speaker:</i> Todd Hardy, AU	
P865	<b>Outcomes after late Cladribine re-dosing in the Australian MSBase cohort</b>	- CEST
	<i>Speaker:</i> Helmut Butzkueven, AU	
P866	<b>Treatment patterns of patients with aggressive MS in a cohort of early retirees</b>	- CEST
	<i>Speaker:</i> Firas Fneish, DE	
P867	<b>Real-world discontinuation rate of teriflunomide and dimethyl fumarate in multiple sclerosis</b>	- CEST
	<i>Speaker:</i> Hilde Norborg, NO	
P868	<b>HIGHER PREVALENCE OF SPINAL CORD RELAPSES AFTER TREATMENT WITH ALEMTUZUMAB</b>	- CEST
	<i>Speaker:</i> Sara Eichau, ES	
P869	<b>CLADRIBINE IN A REAL WORLD SETTING. THE REAL PATIENTS</b>	- CEST
	<i>Speaker:</i> Sara Eichau, ES	
P870	<b>Multiple Sclerosis disease modifying therapy prescription patterns in a low prevalence country</b>	- CEST

	<i>Speaker:</i> Simón Cárdenas-Robledo, CO	
P871	<b>Rituximab – Ocrelizumab comparison in real-world practice</b> <i>Speaker:</i> Ignacio Casanova, ES	- CEST
P872	<b>Differences in expected number of clinical management events before and during treatment with sphingosine-1-phosphate receptor modulators for multiple sclerosis</b> <i>Speaker:</i> Jennifer S. Harper, US	- CEST
P873	<b>The impact of COVID-19 on consultations between Relapsing-Remitting Multiple Sclerosis patients and their neurologists in Europe and United States</b> <i>Speaker:</i> Joanna White, GB	- CEST
P874	<b>Multiple Sclerosis Patients Initiating Ofatumumab in the Real-World: 6 Months Data</b> <i>Speaker:</i> Patricia K. Coyle, US	- CEST
P875	<b>REALMS Study: Single-center retrospective observational single-center study of alemtuzumab (Lemtrada®) treatment in a Spanish cohort of Multiple Sclerosis patients under real-life conditions.</b> <i>Speaker:</i> Sara Eichau, ES	- CEST
P876	<b>Real-World Assessment of Quality of Life Through Patient-Reported Outcomes in Relapsing-Remitting Multiple Sclerosis Patients Treated with Teriflunomide for Two Years. Outcomes of the AURELIO study in Greece</b> <i>Speaker:</i> Efthymios Dardiotis, GR	- CEST
P877	<b>EFFICACY AND SAFETY OF ALEMTUZUMAB IN CLINICAL PRACTICE IN NORTHEASTERN SPAIN</b> <i>Speaker:</i> Tamara Castillo-Triviño, ES	- CEST
<i>Poster Session</i>		
16:45 - 18:45 CEST		
<b>eP26 - ePoster - Repair mechanisms</b>		
P400	<b>Brain network centrality abnormalities in multiple sclerosis: implications for disease course and clinical disability</b> <i>Speaker:</i> Antonio Carotenuto, IT	- CEST
P401	<b>Dynamic functional connectivity of thalamic sub-regions shows divergent patterns in multiple sclerosis phenotypes</b> <i>Speaker:</i> Antonio Carotenuto, IT	- CEST
P402	<b>Increased expression of ephrins on immune cells of patients with relapsing-remitting multiple sclerosis affects oligodendrocyte differentiation</b> <i>Speaker:</i> Arnon Karni, IL	- CEST
P403	<b>Nano-hesperetin enhances the functional recovery and endogenous remyelination of the optic pathway in focal demyelination model</b>	- CEST



*Speaker:* Saeideh Baradaran, IR

*Poster Session*

16:45 - 18:45 CEST

**eP36 - ePoster - Symptomatic treatment**

- |      |   |        |
|------|---|--------|
| P812 | <b>Nabiximols efficacy in MS spasticity: treatment effects on spasticity Numeric Rating Scale and muscle spasm frequency in 2 randomised clinical trials</b><br><i>Speaker:</i> Sajida Javaid, GB | - CEST |
| P813 | <b>Is there 'wearing off' with Ocrelizumab? Preliminary Results of SYMptom Burden on Ocrelizumab, a Longitudinal Study (SymBOLS).</b><br><i>Speaker:</i> Rose-Marie Jungquist, US                 | - CEST |
| P814 | <b>Multiple sclerosis and poststroke spasticity: any difference in botulinum toxin injections treatment?</b><br><i>Speaker:</i> Arianna Sartori, IT   | - CEST |

*Poster Session*

16:45 - 18:45 CEST

**eP08 - ePoster - Epidemiology**

- |      |   |                       |
|------|---|-----------------------|
| P129 | <b>Concomitant autoimmunity and risk of multiple sclerosis disability worsening</b><br><i>Speaker:</i> Stefanie Binzer, SE  | 16:45 - 16:45<br>CEST |
| P130 | <b>Management of vascular risk in people with multiple sclerosis in England: a population-based matched cohort study</b><br><i>Speaker:</i> Raffaele Palladino, GB            | 16:45 - 16:45<br>CEST |
| P131 | <b>Global incidence of multiple sclerosis has not increased in the last three decades: a systematic review (1985-2020)</b><br><i>Speaker:</i> Jo Lane, AU                     | 16:45 - 16:45<br>CEST |
| P132 | <b>No differences in days of absence or grades during upper secondary school in a Norwegian multiple sclerosis case control study</b><br><i>Speaker:</i> Cecilia Simonsen, NO | 16:45 - 16:45<br>CEST |
| P133 | <b>Incidence of Multiple Sclerosis Relapses and Pseudo-Relapses following mRNA COVID-19 vaccination.</b><br><i>Speaker:</i> Scott Chou, US                                    | 16:45 - 16:45<br>CEST |
| P134 | <b>Smoking is a risk factor for relapses in patients with relapsing-remitting multiple sclerosis under fingolimod treatment</b><br><i>Speaker:</i> Eizo Tanaka, JP            | 16:45 - 16:45<br>CEST |
| P135 | <b>Impact of first dose COVID-19 Pfizer and AstraZeneca vaccination in multiple sclerosis: a study from the UK MS Register</b><br><i>Speaker:</i> Richard Nicholas, GB        | 16:45 - 16:45<br>CEST |
| P136 | <b>Trajectories of disability accrual according to age in DMT</b>   | 16:45 - 16:45         |

	<b>treated Multiple Sclerosis cohorts from the Italian MS Registry</b> <i>Speaker:</i> Pietro Iaffaldano, IT	CEST
P137	<b>Differences in MS clinical and epidemiological characteristics between Ashkenazi and Non-Ashkenazi Jewish patients in Israel – A retrospective single center study</b> <i>Speaker:</i> Keren Regev, IL	16:45 - 16:45 CEST
P138	<b>Population-based prospective study of delivery mode and the risk for adult-onset Multiple Sclerosis</b> <i>Speaker:</i> Akash Kapali, NO	16:45 - 16:45 CEST
P139	<b>Incidence and Prevalence of Multiple Sclerosis (MS) in Wales – Algorithmic case finding in routine data</b> <i>Speaker:</i> Rod Middleton, GB	16:45 - 16:45 CEST
P140	<b>Emergency department visits by persons with MS: a population-based study</b> <i>Speaker:</i> Jonas Graf, CA	16:45 - 16:45 CEST
P141	<b>Comparison of two large German MS cohorts derived from different settings to analyze early disability progression</b> <i>Speaker:</i> Jeremias Motte, DE	16:45 - 16:45 CEST
P142	<b>COVID-19 prevalence and outcomes in people with MS taking disease modifying therapies: A population study using NHS England data</b> <i>Speaker:</i> Nikos Evangelou, GB	16:45 - 16:45 CEST
P143	<b>COVID-19 LOCKDOWN IMPACT ON LABOR AND PSYCOSOCIAL ASPECTS IN MULTIPLE SCLEROSIS PATIENTS</b> <i>Speaker:</i> Helena Martínez Hervés, ES	16:45 - 16:45 CEST
P144	<b>Wellbeing gap: one-size MS service does not fit all</b> <i>Speaker:</i> Agne Straukiene, GB	16:45 - 16:45 CEST
P145	<b>Characteristics of MS misdiagnosis in a reference MS center in Latin América</b> <i>Speaker:</i> María Inés Gaitán, AR	16:45 - 16:45 CEST
P146	<b>Epidemiology of COVID-19 among MS population: Population-Based Registry Study in Iran</b> <i>Speaker:</i> Sajjad Ghane Ezabadi, IR	16:45 - 16:45 CEST
P147	<b>Prognostic factors related to the risk of COVID-19 infection in MS patients</b> <i>Speaker:</i> Federico Montini, IT	16:45 - 16:45 CEST
P148	<b>Effects of the modifiable risk factors, alcohol and smoking, on disease risk and neurodegeneration in multiple sclerosis; a large UK community-based cross-sectional cohort study</b> <i>Speaker:</i> Iris Kleerekooper, GB	16:45 - 16:45 CEST
P149	<b>Pro-inflammatory diet is associated with worse long-term depression and anxiety levels but not fatigue in MS.</b>	16:45 - 16:45 CEST

	<i>Speaker:</i> Alice Saul, AU	
P150	<b>AGE AT ONSET OF RELAPSING-REMITTING MULTIPLE SCLEROSIS INCREASED OVER THE LAST DECADES.</b> <i>Speaker:</i> Lucía Romero-Pinel, ES	16:45 - 16:45 CEST
P151	<b>Bayesian structural time series of Multiple Sclerosis Projection in Tehran, Iran</b> <i>Speaker:</i> Sajjad Ghane Ezabadi, IR	16:45 - 16:45 CEST
P152	<b>The trend of incidence, prevalence, and DALY of multiple sclerosis in the Middle East and Northern Africa region compared to global, West Europe and, Iran's corresponding values during 1990–2017: Retrieved from global burden of diseases data</b> <i>Speaker:</i> Mohammad Hossein Harirchian, IR	16:45 - 16:45 CEST
P153	<b>SARS-CoV-2 infection and multiple sclerosis: experience in Albacete (Spain)</b> <i>Speaker:</i> María Palao Rico, ES	16:45 - 16:45 CEST
P154	<b>The impact of socioeconomic factors on fatigue in multiple sclerosis.</b> <i>Speaker:</i> Line Broch, NO	16:45 - 16:45 CEST
P155	<b>Late onset multiple sclerosis Isfahan Iran</b> <i>Speaker:</i> Sama Ayramlou, IR	16:45 - 16:45 CEST
P156	<b>Pharmacovigilance Program for Ozanimod, a Recently Approved Treatment for Relapsing Forms of Multiple Sclerosis</b> <i>Speaker:</i> Sonia Afsari, US	16:45 - 16:45 CEST
P157	<b>Familial multiple sclerosis risk in Iran: A population-based registry study</b> <i>Speaker:</i> Sajjad Ghane Ezabadi, IR	16:45 - 16:45 CEST
P158	<b>COVID-19 in patients with multiple sclerosis and neuromyelitis optica spectrum disorder in Colombia</b> <i>Speaker:</i> María Zuluaga Rodas, CO	16:45 - 16:45 CEST
P159	<b>Vitamin D in Multiple Sclerosis Albanian Patients</b> <i>Speaker:</i> Jera Kruja, AL	16:45 - 16:45 CEST
P160	<b>Characterizing Multiple Sclerosis in the African American Population: Interim Data from the National African American Multiple Sclerosis Registry (NAAMSR)</b> <i>Speaker:</i> Mitzi Williams, US	16:45 - 16:45 CEST

*Poster Session*

16:45 - 18:45 CEST

**eP11 - ePoster - MS symptoms**

P187	<b>COVID-19 vaccination in patients with multiple sclerosis: What we have learnt by May 2021</b> <i>Speaker:</i> Sapir Dreyer-Alster, IL	- CEST
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P188	<b>Poor sleep: a new symptom of multiple sclerosis?</b> <i>Speaker:</i> Laura Laslett, AU	- CEST
P189	<b>Impact of demographics, socioeconomic status and comorbidities on disability outcomes in African-American and Caucasian patients with Multiple Sclerosis</b> <i>Speaker:</i> Maria Petracca, US	- CEST
P190	<b>Safety and efficacy of COVID-19 Pfizer-BNT162b2 m-RNA vaccine in young MS population</b> <i>Speaker:</i> Shay Menascu, IL	- CEST
P191	<b>Hidden Symptoms in MS: A Survey of Clinical Gaps</b> <i>Speaker:</i> S Christy Rohani-Montez, GB	- CEST
P192	<b>Predictors of self-reported fatigue in a large real world multiple sclerosis cohort</b> <i>Speaker:</i> Simon Englund, SE	- CEST
P193	<b>Cognitive change in the pre- and post-relapse period: Evidence from a nationwide longitudinal cohort study</b> <i>Speaker:</i> Kyla A McKay, SE	- CEST
P194	<b>Morphological Correlates of Fatigue in Patients with Multiple Sclerosis</b> <i>Speaker:</i> Stefanie Hechenberger, AT	- CEST
P195	<b>Investigating the association of mood and fatigue with objective and subjective cognitive impairment in Multiple Sclerosis</b> <i>Speaker:</i> Laura Davenport, IE	- CEST
P196	<b>Topographic mismatch between clinical relapse and MRI lesion mapping in multiple sclerosis patients</b> <i>Speaker:</i> Jutta Dünschede, DE	- CEST
P197	<b>Relationship between presence of spinal cord lesion and restless legs syndrome in multiple sclerosis</b> <i>Speaker:</i> Serkan Ozakbas, TR	- CEST
P198	<b>Motor Impairment in Multiple Sclerosis: Analysis from the North American Registry for Care and Research in Multiple Sclerosis (NARCRMS)</b> <i>Speaker:</i> Kottil Rammohan, US	- CEST
P199	<b>Assessment of Sexual Dysfunction and Related Factors in Female Patients with Multiple Sclerosis</b> <i>Speaker:</i> Kubra Yeni, TR	- CEST
P200	<b>Real-time assessment of daytime sleepiness in drivers with multiple sclerosis</b> <i>Speaker:</i> Maryam Sadeghi, IR	- CEST
P201	<b>Bright light therapy as a non-pharmacological treatment option for fatigue in Multiple Sclerosis</b> <i>Speaker:</i> Lisa Voggenberger, AT	- CEST

*Scientific program*

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P202	<b>Assessment of Fatigue and Related Factors Patients with Multiple Sclerosis</b> <i>Speaker:</i> Kubra Yeni, TR	- CEST
P203	<b>Hypogammaglobulinemia: a possible cause of Multiple Sclerosis-related fatigue?</b> <i>Speaker:</i> Lara Diem, CH	- CEST

*Satellite Symposium*

17:45 - 18:45 CEST

R1

**Satellite Symposium 3***Satellite Symposium*

17:45 - 18:45 CEST

R2

**Satellite Symposium 4**

**Thursday, 14 October, 2021**

*Satellite Symposium*  
 10:45 - 11:45 CEST

R1

**Satellite Symposium 5**

*Clinical*  
 12:00 - 13:30 CEST

R1

**Scientific Session 5: IMSCOGS**

*Chair:* Iris-Katharina Penner, DE

*Chair:* Daniela Pinter, AT

<b>Introduction by chairs</b>	12:00 - 12:05 CEST
<b>Episodic Memory impairment in MS: diagnosis, clinical characterisation and management</b> <i>Speaker:</i> John DeLuca, US	12:05 - 12:20 CEST
<b>Information processing speed and attention impairment in MS: diagnosis, clinical characterisation and management</b> <i>Speaker:</i> Bruno Brochet, FR	12:20 - 12:35 CEST
<b>Platform presentations of related original papers</b>	12:35 - 12:35 CEST
<b>Parameters explaining cognitive outcomes in a re-evaluation of the original ASA and SET cohorts after 19 and 10 years of follow-up</b> <i>Speaker:</i> Jiri Motyl, CZ	12:35 - 12:42 CEST
<b>Cortical lesions at diagnosis predict cognitive impairment in multiple sclerosis: a 20-year follow-up study</b> <i>Speaker:</i> Stefano Ziccardi, IT	12:42 - 12:49 CEST
<b>Resting state effective connectivity abnormalities of the Papez circuit contribute to explain worse cognitive performance in multiple sclerosis patients</b> <i>Speaker:</i> Olga Marchesi, IT	12:49 - 12:56 CEST
<b>Cognitively impaired MS patients become stuck in a state of high within-network connectivity</b> <i>Speaker:</i> Tommy A. A. Broeders, NL	12:56 - 13:03 CEST
<b>Live discussion</b>	13:03 - 13:30 CEST

*Pathogenesis*  
 12:00 - 13:30 CEST

R3

**Scientific Session 6: Immunological memory and immunosenescence in MS**

*Chair:* Frauke Zipp, DE

*Chair:* Nikolaos Grigoriadis, GR

<b>Introduction by chairs</b>	12:00 - 12:05 CEST
<b>Impact of immunosenescence in MS</b> <i>Speaker:</i> Clemens Warnke, DE	12:05 - 12:20 CEST

<b>Changing treatment targets in elderly MS patients</b>	12:20 - 12:35
<i>Speaker:</i> Bianca Weinstock-Guttman, US	CEST
<b>Platform presentations of related original papers</b>	12:35 - 12:35
	CEST
<b>Premature immune aging signatures in patients with multiple sclerosis</b>	12:35 - 12:42
<i>Speaker:</i> Melanie Eschborn, DE	CEST
<b>Brain CD4<sup>+</sup> and CD8<sup>+</sup> tissue resident memory T cells dominate white and grey matter T cell fractions in multiple sclerosis</b>	12:42 - 12:49
<i>Speaker:</i> Joost Smolders, NL	CEST
<b>Immune response to the human virome and multiple sclerosis risk</b>	12:49 - 12:56
<i>Speaker:</i> Marianna Cortese, US	CEST
<b>Immunization Status in Persons with Multiple Sclerosis</b>	12:56 - 13:03
<i>Speaker:</i> Anne Zinganell, AT	CEST
<b>Live discussion</b>	13:03 - 13:30
	CEST
<i>Pathogenesis</i>	
12:00 - 13:00 CEST	R10
<b>Hot Topic 5: Role of astrocytes in inflammatory demyelinating CNS disease</b>	
<i>Chair:</i> Roberta Brambilla, US	
<i>Chair:</i> Manuel Comabella, ES	
<b>Introduction by chairs</b>	12:00 - 12:05
	CEST
<b>Astrocyte phenotypes in acute multiple sclerosis lesions</b>	12:05 - 12:15
<i>Speaker:</i> Veit Rothhammer, DE	CEST
<b>Astrocyte responses to pathogenic AQP4-specific antibodies</b>	12:15 - 12:25
<i>Speaker:</i> Claudia Lucchinetti, US	CEST
<b>Astrocytes as a treatment target?</b>	12:25 - 12:35
<i>Speaker:</i> Francesco Quintana, US	CEST
<b>Live discussion</b>	12:35 - 13:00
	CEST
<i>Imaging and non-imaging biomarkers/Translational</i>	
12:00 - 13:00 CEST	
<b>Hot Topic 6: Biosensors in MS – the future has started</b>	
<i>Chair:</i> Patrick Altmann, AT	
<i>Chair:</i> Tjalf Ziemssen, DE	
<b>Introduction by chairs</b>	12:00 - 12:05
	CEST
<b>Active and passive methods/devices for biosensing</b>	12:05 - 12:15
<i>Speaker:</i> Johannes Lorscheider, CH	CEST
<b>Biosensors to monitor disease activity in clinical trials</b>	12:15 - 12:25
<i>Speaker:</i> Jennifer Graves, US	CEST

*Scientific program*

<b>Biosensing in clinical practice</b>	12:25 - 12:35
<i>Speaker:</i> Tanuja Chitnis, US	CEST
<b>Live discussion</b>	12:35 - 13:00
	CEST
<i>Therapy / Global views</i>	
12:00 - 13:30 CEST	
<b>Scientific Session 7: Epidemiology in MS: what we know, don't know and why</b>	
<i>Chair:</i> Helen Tremlett, CA	
<i>Chair:</i> Fritz Leutmezer, AT	
<b>Introduction by chairs</b>	12:00 - 12:05
	CEST
<b>Increasing prevalence in Middle East/Northern Africa: evidence and consequences</b>	12:05 - 12:20
	CEST
<i>Speaker:</i> Riadh Gouider, TN	
<b>Lessons from epidemiology: the changing course of MS</b>	12:20 - 12:35
	CEST
<i>Speaker:</i> Melinda Magyari, DK	
<b>Platform presentations of related original papers</b>	12:35 - 12:35
	CEST
<b>Population-based analysis of the incidence of radiologically isolated syndrome in magnetic resonance imaging and 10-year risk of multiple sclerosis</b>	12:35 - 12:42
	CEST
<i>Speaker:</i> Anna Maunula, FI	
<b>Identifying genetic and epigenetic signatures for predicting conversion to clinically definite multiple sclerosis in the AusLong study cohort</b>	12:42 - 12:49
	CEST
<i>Speaker:</i> Rodney Lea, AU	
<b>Childhood abuse and the risk of multiple sclerosis. A prospective, population-based cohort study</b>	12:49 - 12:56
	CEST
<i>Speaker:</i> Karine Eid, NO	
<b>The impact of smoking cessation on multiple sclerosis disease progression</b>	12:56 - 13:03
	CEST
<i>Speaker:</i> William Rodgers, GB	
<b>Live discussion</b>	13:03 - 13:30
	CEST
<i>Therapy / Global views</i>	
12:00 - 13:00 CEST	
<b>Hot Topic 7: Disease modifying treatment – if and when to stop?</b>	
<i>Chair:</i> Anat Achiron, IL	
<i>Chair:</i> Gabriel Bsteh, AT	
<b>Introduction by chairs</b>	12:00 - 12:05
	CEST
<b>In relapsing MS</b>	12:05 - 12:15
	CEST
<i>Speaker:</i> Ilya Kister, US	
<b>In progressive MS</b>	12:15 - 12:25
	CEST
<i>Speaker:</i> Gavin Giovannoni, GB	



*Scientific program*

<b>How to monitor patients after treatment stop?</b>	12:25 - 12:35
<i>Speaker:</i> Deborah Miller, US	CEST
<b>Live discussion</b>	12:35 - 13:00
	CEST
<i>Educational Sessions</i>	
12:00 - 13:00 CEST	
<b>Educational Session 5: Pathology of MS</b>	
<i>Chair:</i> Roberta Magliozzi, IT	
<i>Chair:</i> Hans Lassmann, AT	
<b>Introduction by chairs</b>	12:00 - 12:05
	CEST
<b>Inflammatory reaction within the CNS of multiple sclerosis patients: mechanisms and potential triggers</b>	12:05 - 12:20
	CEST
<i>Speaker:</i> Inge Huitinga, NL	
<b>Meningeal inflammation</b>	12:20 - 12:35
	CEST
<i>Speaker:</i> Roberta Magliozzi, IT	
<b>The pathology of multiple sclerosis and MOG antibody associated inflammatory demyelinating disease: similarities and differences</b>	12:35 - 12:50
	CEST
<i>Speaker:</i> Hans Lassmann, AT	
<b>Live discussion</b>	12:50 - 13:00
	CEST
<i>Plenary Sessions</i>	
13:30 - 15:00 CEST	
<b>Time to visit the exhibition and to network with colleagues</b>	R2
<i>Satellite Symposium</i>	
13:45 - 14:45 CEST	
<b>Satellite Symposium 6</b>	R1
<i>Satellite Symposium</i>	
13:45 - 14:45 CEST	
<b>Satellite Symposium 7</b>	R2
<i>Clinical</i>	
15:00 - 16:30 CEST	
<b>Scientific Session 8: Paediatric inflammatory demyelinating CNS disorders</b>	R1
<i>Chair:</i> Barbara Kornek, AT	
<i>Chair:</i> Silvia Tenenbaum, AR	
<b>Introduction by chairs</b>	15:00 - 15:05
	CEST
<b>MOG-antibody associated diseases in children</b>	15:05 - 15:20
	CEST
<i>Speaker:</i> Kevin Rostásy, DE	
<b>Now they are grown-up: longterm prognosis in paediatric MS</b>	15:20 - 15:35
	CEST
<i>Speaker:</i> Brenda Banwell, US	

<b>Platform presentations of related original papers</b>	15:35 - 15:35 CEST
<b>Ten year follow-up surveillance of paediatric Acquired Demyelinating Syndromes (ADS) in the United Kingdom</b>	15:35 - 15:42 CEST
<i>Speaker:</i> Omar Abdel-Mannan, GB	
<b>Social Networks in Pediatric Onset Multiple Sclerosis are Associated with Less Peer Pressure</b>	15:42 - 15:49 CEST
<i>Speaker:</i> Wendy Vargas, US	
<b>Functional MRI correlates of Intelligence Quotient and visual-motor coordination in pediatric multiple sclerosis</b>	15:49 - 15:56 CEST
<i>Speaker:</i> Chiara Curatoli, IT	
<b>Characteristic retinal atrophy pattern allows differentiation between paediatric MOGAD and MS after a single optic neuritis episode</b>	15:56 - 16:03 CEST
<i>Speaker:</i> Ilya Ayzenberg, DE	
<b>Live discussion</b>	16:03 - 16:30 CEST
<i>Pathogenesis</i> 15:00 - 16:30 CEST	R3
<b>Scientific Session 9: Genetics and epigenetics</b>	
<i>Chair:</i> Stephen Sawcer, GB	
<i>Chair:</i> Alexander Zimprich, AT	
<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>Where are we now?</b>	15:05 - 15:20 CEST
<i>Speaker:</i> Chris Cotsapas, US	
<b>What needs to be done?</b>	15:20 - 15:35 CEST
<i>Speaker:</i> An Goris, BE	
<b>Platform presentations of related original papers</b>	15:35 - 15:35 CEST
<b>Similar familial risk and heritability in relapsing and progressive onset multiple sclerosis</b>	15:35 - 15:42 CEST
<i>Speaker:</i> Ali Manouchehrinia, SE	
<b>Genetic variation in <i>WNT9B</i> increases relapse hazard in multiple sclerosis</b>	15:42 - 15:49 CEST
<i>Speaker:</i> Marijne Vandebergh, BE	
<b>Whole-blood methylation is associated with disease severity in relapse-onset multiple sclerosis</b>	15:49 - 15:56 CEST
<i>Speaker:</i> Maria Pia Campagna, AU	
<b>A gene-set analysis suggests the possible involvement of iron homeostasis in neurodegeneration in progressive multiple sclerosis</b>	15:56 - 16:03 CEST
<i>Speaker:</i> Antonino Giordano, IT	
<b>Live discussion</b>	16:03 - 16:30

*Pathogenesis*  
15:00 - 16:00 CEST

CEST  
R10

**Young Scientific Investigators' Session 1: Pathogenesis and natural history**

*Chair:* Viktoria Papp, DK

*Chair:* Franziska Di Pauli, AT

<b>Comprehensive autoantigen panel to determine individual immune profiles in multiple sclerosis</b>	15:05 - 15:12 CEST
<i>Speaker:</i> Olivia Thomas, SE	
<b>Inhibitory synaptic loss and network dysfunction in MS: an <i>ex-vivo</i> to <i>in-silico</i> translational study</b>	15:12 - 15:19 CEST
<i>Speaker:</i> Marijn Huiskamp, NL	
<b>Endosomal sorting complex III is dysregulated in cortical neurons in progressive MS and associated with necroptosis activation.</b>	15:19 - 15:26 CEST
<i>Speaker:</i> Carmen Picon, GB	
<b>Natural history of multiple sclerosis with childhood and adolescence onset</b>	15:26 - 15:33 CEST
<i>Speaker:</i> Ermelinda De Meo, IT	
<b>Olfactory threshold predicts treatment response in relapsing multiple sclerosis</b>	15:33 - 15:40 CEST
<i>Speaker:</i> Gabriel Bsteh, AT	

*Imaging and non-imaging biomarkers/Translational*  
15:00 - 16:30 CEST

**Scientific Session 10: Body-fluid biomarkers**

*Chair:* Georgina Arrambide, ES

*Chair:* Michael Khalil, AT

<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>Neurofilaments: ready for routine clinical use?</b>	15:05 - 15:20 CEST
<i>Speaker:</i> Jens Kuhle, CH	
<b>Emerging biomarkers</b>	15:20 - 15:35 CEST
<i>Speaker:</i> Charlotte Teunissen, NL	
<b>Platform presentations of related original papers</b>	15:35 - 15:35 CEST
<b>Association of serum neurofilament light levels and disease progression in patients with relapsing remitting multiple sclerosis treated with natalizumab</b>	15:35 - 15:42 CEST
<i>Speaker:</i> Claire Bridel, CH	
<b>Serum Neurofilament Light Chain is Associated with Longitudinal Brain Atrophy and Radiological Disease Activity in the MS PATHS Network</b>	15:42 - 15:49 CEST
<i>Speaker:</i> Elias Sotirchos, US	
<b>Serum and CSF metabolomics detect clinically-silent neuroinflammatory lesions earlier than neurofilament-light in a focal delayed-type hypersensitivity multiple sclerosis rat model</b>	15:49 - 15:56 CEST

*Scientific program**Speaker:* Tianrong Yeo, GB**CSF proteins Carboxypeptidase-E and Semaphorin-7A are associated with pediatric-onset MS**15:56 - 16:03  
CEST*Speaker:* A.L. Bruijstens, NL**Live discussion**16:03 - 16:30  
CEST*Therapy / Global views*

15:00 - 16:30 CEST

**Scientific Session 11: Global networks in MS***Chair:* Alexey Boyko, RU*Chair:* Jefferson Becker, BR**Introduction by chairs**15:00 - 15:05  
CEST**Cross-border MS health care collaborations: chances and hurdles**15:05 - 15:20  
CEST*Speaker:* Bernhard Hemmer, DE**Standardization of MS care: advantages and needs**15:20 - 15:35  
CEST*Speaker:* Bassem Yamout, LB**Barriers to access and utilization of MS care services**15:35 - 15:50  
CEST*Speaker:* Victor Fernando Hamuy Diaz de Bedoya, PY**The power of global scientific collaboration**15:50 - 16:05  
CEST*Speaker:* Kazuo Fujihara, JP**Live discussion**16:05 - 16:30  
CEST*Therapy / Global views*

15:00 - 16:00 CEST

R9

**Meet the Expert 1: Vaccines and b-cell targeting treatments in MS***Chair:* Emmanuelle Waubant, US*Chair:* Andreas Lutterotti, CH*Educational Sessions*

15:00 - 16:00 CEST

**Educational Session 6: Infections and MS***Chair:* Thomas Berger, AT*Chair:* Renaud Du Pasquier, CH**Introduction by chairs**15:00 - 15:05  
CEST**COVID-19 pandemic: multiple sclerosis patients under disease-modifying therapies**15:05 - 15:20  
CEST*Speaker:* Thomas Berger, AT**The risk of infection among patients treated with disease-modifying therapies: factors to consider**15:20 - 15:35  
CEST*Speaker:* Anna Fogdell-Hahn, SE**Opportunistic infections under disease-modifying therapies**

15:35 - 15:50

## Scientific program

	<i>Speaker:</i> Renaud Du Pasquier, CH	CEST
	<b>Live discussion</b>	15:50 - 16:00 CEST
<i>Clinical</i>		
16:45 - 17:45 CEST		R1
	<b>Free Communication 1: COVID-19</b>	
	<i>Chair:</i> Maura Pugliatti, IT	
	<i>Chair:</i> Harald Hegen, AT	
	<b>COVID-19 severity and mortality in multiple sclerosis do not depend on immunotherapy: insights from a nation-wide Austrian registry</b>	16:50 - 16:57 CEST
	<i>Speaker:</i> Gabriel Bsteh, AT	
	<b>No association between rituximab infusion timing nor cumulative dose and hospitalization for COVID-19: Evidence from the nationwide COMBAT-MS Cohort</b>	16:57 - 17:04 CEST
	<i>Speaker:</i> Thomas Frisell, SE	
<i>Clinical</i>		
16:45 - 17:45 CEST		R2
	<b>Young Scientific Investigators' Session 2: Clinical - from prognosis to burden</b>	
	<i>Chair:</i> Daniela Pinter, AT	
	<i>Chair:</i> Mario Habek, HR	
	<b>Introduction by chairs</b>	16:45 - 16:50 CEST
	<b>Early identification of multiple sclerosis patients with normal brain MRI at onset</b>	16:50 - 16:57 CEST
	<i>Speaker:</i> Sarah Wright, GB	
	<b>Social Determinants of Health in Relapsing Remitting Multiple Sclerosis Patients</b>	16:57 - 17:04 CEST
	<i>Speaker:</i> Justin Abbatemarco, US	
	<b>Cardiometabolic comorbidity is associated with longitudinal total brain and gray matter compartment atrophy in a large multiple sclerosis cohort</b>	17:04 - 17:11 CEST
	<i>Speaker:</i> Kathryn Fitzgerald, US	
	<b>Early treatment can postpone the time to disability pension in relapsing-remitting multiple sclerosis</b>	17:11 - 17:18 CEST
	<i>Speaker:</i> Malthe Wandall-Holm, DK	
	<b>Autologous Hematopoietic Stem Cell Transplantation Reduces Disability Progression In Patients With Secondary Progressive Multiple Sclerosis: Results From The Italian MS Register</b>	17:18 - 17:25 CEST
	<i>Speaker:</i> Giacomo Boffa, IT	
	<b>Live discussion</b>	17:25 - 17:45 CEST

*Scientific program**Pathogenesis*

16:45 - 17:45 CEST

R3

**Hot Topic 8: Neurodegeneration in demyelinating CNS diseases***Chair:* Sonja Hochmeister, AT*Chair:* Wolfgang Brück, DE

<b>Introduction by chairs</b>	16:45 - 16:50 CEST
<b>Neurodegeneration in gray matter of MS and NMOSD</b>	16:50 - 17:00 CEST
<i>Speaker:</i> Izumi Kawachi, JP	
<b>Neuronal vulnerability and multilineage diversity in MS</b>	17:00 - 17:10 CEST
<i>Speaker:</i> Lucas Schirmer, DE	
<b>Treatment targets in neurodegenerative processes of MS</b>	17:10 - 17:20 CEST
<i>Speaker:</i> Catherine Lubetzki, FR	
<b>Live discussion</b>	17:20 - 17:45 CEST

*Pathogenesis*

16:45 - 17:45 CEST

R10

**Hot Topic 9: Translation of advances in experimental inflammation to (treatment strategies in) MS***Chair:* Monika Bradl, AT*Chair:* Bert 't Hart, NL

<b>Introduction by chairs</b>	16:45 - 16:50 CEST
<b>T-cells: a revisited view on phenotypes and functions</b>	16:50 - 17:00 CEST
<i>Speaker:</i> Francesca Odoardi, DE	
<b>The role of complement</b>	17:00 - 17:10 CEST
<i>Speaker:</i> Dorothy P Schafer, US	
<b>The role of fibrin</b>	17:10 - 17:20 CEST
<i>Speaker:</i> Katerina Akassoglou, US	
<b>Live discussion</b>	17:20 - 17:45 CEST

*Imaging and non-imaging biomarkers/Translational*

16:45 - 17:45 CEST

**Meet the Expert 2: MRI in clinical practice: lesions, atrophy and beyond***Chair:* Mike P. Wattjes, DE*Chair:* Mar Tintoré, ES*Imaging and non-imaging biomarkers/Translational*

16:45 - 17:45 CEST

R11

**Hot Topic 10: Cortical demyelination – a key factor in disease progression***Chair:* Christine Stadelmann-Nessler, DE*Chair:* Simon Hametner, AT

<b>Introduction by chairs</b>	16:45 - 16:50 CEST
<b>Meningeal inflammation first</b>	16:50 - 17:00 CEST
<i>Speaker:</i> Richard Reynolds, GB	

<b>Factors causing cortical demyelination</b>	17:00 - 17:10
<i>Speaker:</i> Jeffrey Bennett, US	CEST
<b>Imaging of cortical demyelination</b>	17:10 - 17:20
<i>Speaker:</i> Roberta Magliozzi, IT	CEST
<b>Live discussion</b>	17:20 - 17:45
	CEST

*Therapy / Global views*

16:45 - 17:45 CEST

**Free Communication 2: Treatment trials - Immunomodulation***Chair:* Carmen Infante Duarte, DE*Chair:* Jan Bauer, AT

<b>Phase 2 Safety and Efficacy Study of Intrathecal MSC-NTF cells in Progressive Multiple Sclerosis</b>	16:50 - 16:57
<i>Speaker:</i> Jeffrey Cohen, US	CEST
<b>Effects of evobrutinib, a Bruton's tyrosine kinase inhibitor, on slowly expanding lesions: an emerging imaging marker of chronic tissue loss in multiple sclerosis</b>	16:57 - 17:04
<i>Speaker:</i> Douglas L Arnold, CA	CEST
<b>Evobrutinib significantly reduces relapses and magnetic resonance imaging outcomes in patients with multiple sclerosis: association with baseline neurofilament light chain levels</b>	17:04 - 17:11
<i>Speaker:</i> Jens Kuhle, CH	CEST
<b>Phase 3 results of the ULTIMATE I &amp; II global studies: ublituximab versus teriflunomide in relapsing multiple sclerosis</b>	17:11 - 17:18
<i>Speaker:</i> Lawrence Steinman, US	CEST
<b>Indirect Comparison Analysis of FDA-Approved Treatment Options for Adults with Aquaporin-4 Immunoglobulin G-positive Neuromyelitis Optica Spectrum Disorder</b>	17:18 - 17:25
<i>Speaker:</i> Dean M Wingerchuk, US	CEST

*Therapy / Global views*

16:45 - 17:45 CEST

R9

**Burning Debate: B-cell depletion therapies (anti-CD20) should be administered indefinitely according to their marketing authorisations as a treatment for multiple sclerosis***Chair:* Jiwon Oh, CA

<b>Introduction by chair</b>	16:45 - 16:50
	CEST
<b>For the motion</b>	16:50 - 17:05
<i>Speaker:</i> Fredrik Piehl, SE	CEST
<b>Against the motion</b>	17:05 - 17:20
<i>Speaker:</i> Emma Tallyntyre, GB	CEST
<b>Live discussion</b>	17:20 - 17:45
	CEST

*Scientific program*

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*Poster Session*  
18:00 - 20:00 CEST

R1

**Poster Viewing 2**

*Poster Session*  
18:00 - 20:00 CEST

**ePoster Library**

*Satellite Symposium*  
19:00 - 20:00 CEST

R1

**Satellite Symposium 8**

*Satellite Symposium*  
19:00 - 20:00 CEST

R2

**Satellite Symposium 9**



**Friday, 15 October, 2021**

*Satellite Symposium*  
10:45 - 11:45 CEST

R1

**Satellite Symposium 10**

*Clinical*  
12:00 - 13:30 CEST

R1

**Scientific Session 12: Patients' perspectives**

*Chair:* Maria Pia Amato, IT

*Chair:* Oscar Fernandez-Fernandez, ES

**Introduction by chairs**

12:00 - 12:05  
CEST

**Strategies to implement patient-related outcomes in routine practice**

12:05 - 12:20  
CEST

*Speaker:* Patricia K. Coyle, US

**Patients' needs and perspectives to improve treatment decision-making**

12:20 - 12:35  
CEST

*Speaker:* Daniel Golan, IL

**Platform presentations of related original papers**

12:35 - 12:35  
CEST

**The Barcelona baseline risk score to predict long-term prognosis: a 360° multidimensional confirmation**

12:35 - 12:42  
CEST

*Speaker:* Mar Tintoré, ES

**Subclinical Burden of Multiple Sclerosis at EDSS 0**

12:42 - 12:49  
CEST

*Speaker:* Stephen Krieger, US

**Measuring patient-reported upper limb function in multiple sclerosis clinical trials: can item banks achieve measurement nirvana??**

12:49 - 12:56  
CEST

*Speaker:* Jeremy Hobart, GB

**Smartphone monitoring of cognition and walking function in multiple sclerosis**

12:56 - 13:03  
CEST

*Speaker:* Ka Hoo Lam, NL

**Live Discussion**

13:03 - 13:30  
CEST

*Clinical*  
12:00 - 13:00 CEST

R2

**Meet the Expert 3: Differential diagnosis: atypical MS and MS mimics**

*Chair:* Aksel Siva, TR

*Chair:* Celia Oreja-Guevara, ES

*Scientific program**Pathogenesis*

12:00 - 13:30 CEST

R3

**Scientific Session 13: B-cells responses in MS: phenotypes and interactions***Chair:* Mireia Sospedra Ramos, CH*Chair:* Amit Bar-Or, US

<b>Introduction by chairs</b>	12:00 - 12:05 CEST
<b>B-cell phenotypes in MS</b>	12:05 - 12:20 CEST
<i>Speaker:</i> Simon Fillatreau, FR	
<b>B-cell responses based on molecular diagnosis</b>	12:20 - 12:35 CEST
<i>Speaker:</i> Bibiana Bielekova, US	
<b>Platform presentations of related original papers</b>	12:35 - 12:35 CEST
<b>Formation and immunomodulatory function of meningeal B cell aggregates in progressive CNS autoimmunity</b>	12:35 - 12:42 CEST
<i>Speaker:</i> Meike Mitsdoerffer, DE	
<b>Brain-infiltrating B cells in MS: from peripheral induction to local effector function</b>	12:42 - 12:49 CEST
<i>Speaker:</i> Marvin M. van Luijn, NL	
<b>The role of peripheral autoreactive antibodies in initiation and propagation of central nervous system demyelinating disorders</b>	12:49 - 12:56 CEST
<i>Speaker:</i> Marie Freier, DE	
<b>Humoral and cell-based responses following SARS-CoV-2 mRNA vaccination of patients with multiple sclerosis on B-cell depleting therapy.</b>	12:56 - 13:03 CEST
<i>Speaker:</i> Mihir Kakara, US	
<b>Live discussion</b>	13:03 - 13:30 CEST

*Pathogenesis*

12:00 - 13:00 CEST

R10

**Free Communication 3: Pathology***Chair:* Iris-Katharina Penner, DE*Chair:* Afrim Blyta, XK

<b>Combined MRI and neuropathology pattern characterization of subpial cortical lesion activity in multiple sclerosis.</b>	12:05 - 12:12 CEST
<i>Speaker:</i> Roberta Magliozzi, IT	
<b>High-resolution quantitative MRI of postmortem multiple sclerosis spinal cord detects lesions with both complete demyelination and intermediate pathology</b>	12:12 - 12:19 CEST
<i>Speaker:</i> Kedar Mahajan, US	
<b>The contribution of active inflammatory pathology and local complement activation in the thalamus to progressive multiple sclerosis outcome.</b>	12:19 - 12:26 CEST
<i>Speaker:</i> Benjamin Cooze, GB	
<b>High dimensional single-cell profiling identifies NK-like CD8+ T</b>	12:26 - 12:33

**cells with high cytotoxic properties that are the reservoir of clonal cells related to disease activity in multiple sclerosis** CEST

*Speaker:* Emilie Dugast, FR

**Single cell analysis of cerebrospinal fluid leukocytes in treated multiple sclerosis patients** 12:33 - 12:40 CEST

*Speaker:* Gerd Meyer zu Hörste, DE

*Imaging and non-imaging biomarkers/Translational*

12:00 - 13:30 CEST

**Scientific Session 14: Advanced MRI methods for assessing changes in brain metabolism and tissue structure**

*Chair:* Stefan Ropele, AT

*Chair:* Hugo Vrenken, NL

**Introduction by chairs** 12:00 - 12:05 CEST

**High resolution chemical shift imaging in MS** 12:05 - 12:20 CEST  
*Speaker:* Wolfgang Bogner, AT

**Imaging of white matter integrity** 12:20 - 12:35 CEST  
*Speaker:* Maria Assunta Rocca, IT

**Platform presentations of related original papers** 12:35 - 12:35 CEST

**Cervical spinal cord T2 lesions independently predict early conversion to secondary progressive multiple sclerosis: a longitudinal 10-year study** 12:35 - 12:42 CEST  
*Speaker:* Laura Lacruz-Ballester, ES

**Longitudinal changes in brain substructure volumes and retinal layer thicknesses following acute optic neuritis in multiple sclerosis: *In-vivo* evidence for clinically relevant trans-synaptic degeneration** 12:42 - 12:49 CEST  
*Speaker:* Olwen C. Murphy, US

**Functional connectivity networks estimated via deep learning outperform observed functional connectivity networks in classifying people with multiple sclerosis by disability level** 12:49 - 12:56 CEST  
*Speaker:* Ceren Tozlu, US

**Selecting structural MRI predictors of cognitive status in MS patients through a machine learning approach applied to a large multicenter MS population** 12:56 - 13:03 CEST  
*Speaker:* Alessandro d'Ambrosio, IT

**Live discussion** 13:03 - 13:30 CEST

*Therapy / Global views*

12:00 - 13:30 CEST

**Scientific Session 15: Neurorehabilitation in MS – delete old views and see new ways**

*Chair:* Hanneke Hulst, NL

*Chair:* Alan J. Thompson, GB

**Introduction by chairs** 12:00 - 12:05

<b>The potential of exercise during the course of MS</b>	12:05 - 12:20
<i>Speaker:</i> Ulrik Dalgas, DK	CEST
<b>The potential of motor imagery in neurorehabilitation of MS</b>	12:20 - 12:35
<i>Speaker:</i> Barbara Seebacher, AT	CEST
<b>Platform presentations of related original papers</b>	12:35 - 12:35
	CEST
<b>Disease-modifying and neuroprotective efficacy of exercise therapy early in the disease course of multiple sclerosis - the Early Multiple Sclerosis Exercise Study (EMSES)</b>	12:35 - 12:42
<i>Speaker:</i> Morten Riemenschneider, DK	CEST
<b>Cardiorespiratory Fitness and Free-Living Physical Activity Are Not Associated with Cognition in Persons with Progressive Multiple Sclerosis: Baseline Analyses From the COGEX Study</b>	12:42 - 12:49
<i>Speaker:</i> Brian Sandroff, US	CEST
<b>Nabiximols reduces muscle tone in multiple sclerosis spasticity: differential effects in Modified Ashworth Scale muscle groups in 2 randomised clinical trials</b>	12:49 - 12:56
<i>Speaker:</i> Jacqueline Nicholas, US	CEST
<b>Successful long-term management of spasticity in people with multiple sclerosis using a software application (App): Results from a randomized-controlled, multicenter study</b>	12:56 - 13:03
<i>Speaker:</i> Rainer Ehling, AT	CEST
<b>Live discussion</b>	13:03 - 13:30
	CEST

*Therapy / Global views*

12:00 - 13:00 CEST

**Free Communication 4: Treatment trials - Neuroprotection and remyelination***Chair:* Raed Alroughani, KW*Chair:* Laura Airas, FI

<b>Efficacy and Safety of Opicinumab in Participants with Relapsing Multiple Sclerosis: A Randomized, Placebo-Controlled, Phase 2 Trial (AFFINITY Part 1)</b>	12:05 - 12:12
<i>Speaker:</i> Peter Calabresi, US	CEST
<b>An RXR agonist causes age-dependent remyelination in people with relapsing remitting MS</b>	12:12 - 12:19
<i>Speaker:</i> Christopher E McMurrin, GB	CEST
<b>Safety and efficacy of elezanumab in relapsing and progressive forms of multiple sclerosis: Results from two phase 2 studies, RADIUS-R and RADIUS-P</b>	12:19 - 12:26
<i>Speaker:</i> Bruce Cree, US	CEST
<b>Improvement of Brain Energy Metabolism in Relapsing Multiple Sclerosis Patients: Results from Phase 2 REPAIR-MS Clinical Trial With CNM-Au8</b>	12:26 - 12:33
<i>Speaker:</i> Robert L. Glanzman, US	CEST

<b>Ibudilast slows retinal atrophy in progressive multiple sclerosis: post-hoc analyses of the SPRINT-MS phase II randomized controlled trial</b> <i>Speaker:</i> Henrik Ehrhardt, US	12:33 - 12:40 CEST
 <i>Educational Sessions</i> 12:00 - 13:00 CEST	
<b>Educational Session 7: Early stages of MS</b>	
<i>Chair:</i> Russell Dale, AU	
<i>Chair:</i> Christine Lebrun-Frenay, FR	
<b>Introduction by chairs</b>	12:00 - 12:05 CEST
<b>When does the disease start? MS Prodrome</b> <i>Speaker:</i> Ruth Ann Marrie, CA	12:05 - 12:20 CEST
<b>The radiologically isolated syndrome (RIS), is it already MS?</b> <i>Speaker:</i> Christine Lebrun-Frenay, FR	12:20 - 12:35 CEST
<b>How could paediatric MS shed light on early MS?</b> <i>Speaker:</i> Russell Dale, AU	12:35 - 12:50 CEST
<b>Live discussion</b>	12:50 - 13:00 CEST
 <i>Plenary Sessions</i> 13:30 - 15:00 CEST	
<b>Time to visit the exhibition and to network with colleagues</b>	
 <i>Satellite Symposium</i> 13:45 - 14:45 CEST	
<b>Satellite Symposium 11</b>	
 <i>Satellite Symposium</i> 13:45 - 14:45 CEST	
<b>Satellite Symposium 12</b>	
 <i>Clinical</i> 15:00 - 16:00 CEST	
<b>Free Communication 5: Progression</b>	
<i>Chair:</i> Christiane Schmied, AT	
<i>Chair:</i> Zsolt Illes, DK	
<b>Progression independent of relapse activity in paediatric, adult and late-onset multiple sclerosis patients</b> <i>Speaker:</i> Angelo Bellinva, IT	15:05 - 15:12 CEST
<b>Progression independent of relapse activity is present from disease onset: a complete view of the phenomenon in the CIS/early MS cohort of Barcelona</b> <i>Speaker:</i> Carmen Tur, ES	15:12 - 15:19 CEST
<b>Progression independent of relapse activity is associated with increased brain atrophy rates in patients with relapsing-</b>	15:19 - 15:26 CEST

**remitting multiple sclerosis***Speaker:* Alessandro Cagol, CH**Neurofilament light levels predict disease progression in a heterogeneous large real-world MS population**15:26 - 15:33  
CEST*Speaker:* Synne Brune, NO**Sustained reduction in 48-week confirmed disability progression in patients with PPMS treated with ocrelizumab in the ORATORIO OLE: 8-year follow-up**15:33 - 15:40  
CEST*Speaker:* Jerry S. Wolinsky, US*Clinical*

15:00 - 16:00 CEST

R2

**Free Communication 6: Clinical***Chair:* Michael Guger, AT*Chair:* Monika Adamczyk-Sowa, PL**The value of optic nerve in the multiple sclerosis diagnostic criteria: a longitudinal, prospective, multicentre study**15:05 - 15:12  
CEST*Speaker:* Àngela Vidal-Jordana, ES**Long-term outcomes in patients presenting with optic neuritis: analyses of the MSBase registry**15:12 - 15:19  
CEST*Speaker:* Rachel Kenney, US**Real-world experience with Ocrelizumab in relapsing multiple sclerosis: insights from the MSOCR-R cohort, an MSBase Registry sub-study**15:19 - 15:26  
CEST*Speaker:* Helmut Butzkueven, AU**Multiple Sclerosis and risks for adverse perinatal and pregnancy outcomes: Results from a nationwide cohort study**15:26 - 15:33  
CEST*Speaker:* Katharina Fink, SE**A comprehensive assessment of the total economic burden of multiple sclerosis in the United States**15:33 - 15:40  
CEST*Speaker:* Bruce Bebo, US*Pathogenesis*

15:00 - 16:30 CEST

R3

**Scientific Session 16: Gut microbiome – much ado about nothing?***Chair:* Paulus Rommer, AT*Chair:* Gabriele C. De Luca, GB**Introduction by chairs**15:00 - 15:05  
CEST**Gut microbiome and brain inflammation**15:05 - 15:20  
CEST*Speaker:* Anne-Katrin Pröbstel, CH**Therapeutic modulation of the microbiome**15:20 - 15:35  
CEST*Speaker:* Stephanie Tankou, US**Platform presentations of related original papers**15:35 - 15:35  
CEST

<b>Skin and gut imprinted T helper cell subsets exhibit distinct functional phenotypes in central nervous system autoimmunity</b>	15:35 - 15:42 CEST
<i>Speaker:</i> Thomas Korn, DE	
<b>Exploring gut microbiome in 576 pairs of multiple sclerosis patients and household healthy controls (iMSMS)</b>	15:42 - 15:49 CEST
<i>Speaker:</i> Xiaoyuan Zhou, US	
<b>Gut microbiota differences between pediatric-onset MS, pediatric monophasic ADS and pediatric healthy controls</b>	15:49 - 15:56 CEST
<i>Speaker:</i> A.L. Bruijstens, NL	
<b>Dimethyl fumarate alters gut microbiota metabolism in multiple sclerosis</b>	15:56 - 16:03 CEST
<i>Speaker:</i> Martin Diebold, DE	
<b>Live discussion</b>	16:03 - 16:30 CEST
<i>Pathogenesis</i>	
15:00 - 16:30 CEST	R10
<b>Scientific Session 17: Glial cell heterogeneity in MS</b>	
<i>Chair:</i> Claudia Verderio, IT	
<i>Chair:</i> V. Wee Yong, CA	
<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>Altered human oligodendrocytes in MS</b>	15:05 - 15:20 CEST
<i>Speaker:</i> Sarah Jaekel, GB	
<b>Microglia phenotypical changes during MS disease course</b>	15:20 - 15:35 CEST
<i>Speaker:</i> Tobias Zrzavy, AT	
<b>Platform presentations of related original papers</b>	15:35 - 15:35 CEST
<b>Profiling microglial nodules in MS: possible implications for MS lesion formation</b>	15:35 - 15:42 CEST
<i>Speaker:</i> Aletta van den Bosch, NL	
<b>Sphingosine-1-receptor-modulators promote directly the differentiation of human iPSC-derived oligodendrocytes</b>	15:42 - 15:49 CEST
<i>Speaker:</i> Farina Windener, DE	
<b>Increased remyelination and shift towards pro-regenerative microglia under Siponimod treatment in preclinical in vivo models</b>	15:49 - 15:56 CEST
<i>Speaker:</i> Michael Dietrich, DE	
<b>Genotyping Microglia in MS Gray and White Matter Lesion Borders</b>	15:56 - 16:03 CEST
<i>Speaker:</i> Anthony Chomyk, US	
<b>Live discussion</b>	16:03 - 16:30 CEST

*Scientific program**Imaging and non-imaging biomarkers/Translational*

15:00 - 16:00 CEST

**Young Scientific Investigators' Session 3: Imaging***Chair:* Nevin Shalaby, EG*Chair:* Katie K. H. Chan, CN

<b>Comparison of MRI Lesion Evolution in Different Central Nervous System Demyelinating Disorders</b>	15:05 - 15:12 CEST
<i>Speaker:</i> Elia Sechi, IT	
<b>Relationship between slowly expanding lesions (SELs), T1-black holes and MTR in relapsing-onset multiple sclerosis</b>	15:12 - 15:19 CEST
<i>Speaker:</i> Alberto Calvi, GB	
<b>Cortical remyelination predicts cortical atrophy and clinical progression in early multiple sclerosis</b>	15:19 - 15:26 CEST
<i>Speaker:</i> Andrea Lazzarotto, IT	
<b>Longitudinal retinal optical coherence tomography in myelin oligodendrocyte glycoprotein antibody disorders</b>	15:26 - 15:33 CEST
<i>Speaker:</i> Frederike Cosima Oertel, DE	
<b>MRI and clinical features differentiate non-acute MOGAD from AQP4-NMOSD and RRMS: a MAGNIMS multicenter study</b>	15:33 - 15:40 CEST
<i>Speaker:</i> Rosa Cortese, GB	

*Therapy / Global views*

15:00 - 16:30 CEST

**ECTRIMS-EAN Session***Chair:* Massimo Filippi, IT*Chair:* Mar Tintoré, ES*Chair:* Maria Pia Amato, IT*Chair:* Celia Oreja-Guevara, ES

<b><u>Introduction to the ECTRIMS / EAN consensus for vaccination in MS patients</u></b>	15:00 - 15:05 CEST
<b>Safety and immunogenicity of vaccinations in MS - Current Evidence</b>	15:05 - 15:15 CEST
<i>Speaker:</i> Sandra Vukusic, FR	
<b>Recommended standards for vaccinations in MS patients</b>	15:15 - 15:25 CEST
<i>Speaker:</i> Susana Otero-Romero, ES	
<b>Position statement on Covid19 vaccinations in MS patients</b>	15:25 - 15:35 CEST
<i>Speaker:</i> Mauricio Farez, AR	
<b>Live discussion</b>	15:35 - 15:50 CEST
<b><u>Introduction to the ECTRIMS / EAN Clinical Guidelines on the treatment of MS: 2021 update</u></b>	15:50 - 15:55 CEST
<b>Methodological overview of the GL development process</b>	15:55 - 16:05 CEST
<i>Speaker:</i> Simón Cárdenas-Robledo, CO	
<b>Updated recommendations on the treatment of patients with MS</b>	16:05 - 16:15



*Scientific program*

*Speaker:* Xavier Montalban, ES CEST

**Live discussion** 16:15 - 16:30  
CEST

*Therapy / Global views*

15:00 - 16:00 CEST

**Meet the Expert 4: Should patients with radiologically isolated syndrome be treated?***Chair:* Orhun Kantarci, US*Chair:* Christine Lebrun-Frenay, FR*Educational Sessions*

15:00 - 16:00 CEST

**Educational Session 8: Beyond MS: Paraneoplastic syndromes, iatrogenic demyelination and autoimmune encephalitis***Chair:* Josep Dalmau, ES*Chair:* Reinhard Hohlfeld, DE

**Introduction by chairs** 15:00 - 15:05  
CEST

**A practical update: Diagnosis and management of paraneoplastic and autoimmune encephalitis** 15:05 - 15:20  
CEST

*Speaker:* Josep Dalmau, ES

**CNS Demyelination complicating immunotherapies: a rising spectrum** 15:20 - 15:35  
CEST

*Speaker:* Reinhard Hohlfeld, DE

**Rare but paradigmatic inflammatory CNS disorders: Rasmussen, SUSAC, CLIPPERS, Narcolepsy** 15:35 - 15:50  
CEST

*Speaker:* Alexandre Prat, CA

**Live discussion** 15:50 - 16:00  
CEST

*Late Breaking News*

16:45 - 17:45 CEST

R1

**Scientific Session 18: Late Breaking News***Chair:* Samia Khoury, LB*Chair:* Heinz Wiendl, DE

**Introduction by chairs** 16:45 - 16:50  
CEST

**Live discussion** 16:50 - 17:03  
CEST

*Plenary Sessions*

18:00 - 19:00 CEST

R1

**Plenary Session 2 : Awards,ECTRIMS Honorary Members, Charcot Lecture and ECTRIMS 2021 Highlights***Chair:* Maria Pia Amato, IT*Chair:* Mar Tintoré, ES*Chair:* Thomas Berger, AT

**Introduction by chairs** 18:00 - 18:05  
CEST

**Presentation of selected poster awards, awards for best oral** 18:05 - 18:15

<b>presentations by young researchers, the MSIF award as well announcement of ECTRIMS Honorary Members</b>	CEST
<b>Charcot Lecture:</b>	18:15 - 18:35
	CEST
<b>Clinical highlights</b>	18:35 - 18:45
<i>Speaker:</i> Lou Brundin, SE	CEST
<i>Speaker:</i> Ruth Ann Marrie, CA	
<b>Scientific highlights</b>	18:45 - 18:55
<i>Speaker:</i> Roland Wiest, CH	CEST
<i>Speaker:</i> Martin Kerschensteiner, DE	
<b>Welcome to ECTRIMS 2022</b>	18:55 - 19:00
<i>Speaker:</i> Bernard Uitdehaag, NL	CEST

**Friday, 29 October, 2021**

*Educational Sessions*  
15:00 - 16:00 CEST

R6

**Educational Session 9: A closer and quantitative look on in vivo MS pathology (MAGNIMS/ECTRIMS session)**

*Chair:* Maria Assunta Rocca, IT

*Chair:* Cristina Granziera, CH

<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>Imaging myelin damage</b> <i>Speaker:</i> Maria Assunta Rocca, IT	15:05 - 15:20 CEST
<b>Imaging axonal damage</b> <i>Speaker:</i> Cristina Granziera, CH	15:20 - 15:35 CEST
<b>Imaging MS lesion heterogeneity with susceptibility MRI</b> <i>Speaker:</i> Daniel S. Reich, US	15:35 - 15:50 CEST
<b>Live discussion</b>	15:50 - 16:00 CEST

*Educational Sessions*  
15:00 - 16:00 CEST

R7

**Educational Session 10: Specific aspects of MS treatment**

*Chair:* Sandra Vukusic, FR

*Chair:* Clemens Warnke, DE

<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>DMTs in women planning or during pregnancy</b> <i>Speaker:</i> Sandra Vukusic, FR	15:05 - 15:20 CEST
<b>DMTs in elderly patients</b> <i>Speaker:</i> Clemens Warnke, DE	15:20 - 15:35 CEST
<b>Stopping DMTs</b> <i>Speaker:</i> Gabriel Bsteh, AT	15:35 - 15:50 CEST
<b>Live discussion</b>	15:50 - 16:00 CEST

*Educational Sessions*  
16:15 - 17:15 CEST

R6

**Educational Session 11: ECTRIMS/EANM teaching course on molecular imaging**

*Chair:* Bruno Stankoff, FR

*Chair:* Laura Airas, FI

<b>Introduction by chairs</b>	16:15 - 16:20 CEST
<b>Molecular imaging of the neuro-inflammatory component in MS</b> <i>Speaker:</i> Laura Airas, FI	16:20 - 16:35 CEST
<b>Metabolic imaging in MS</b> <i>Speaker:</i> Matilde Inglese, IT	16:35 - 16:50 CEST

*Scientific program*

<b>Imaging myelin content change: PET or MRI?</b>	16:50 - 17:05
<i>Speaker:</i> Bruno Stankoff, FR	CEST
<b>Live discussion</b>	17:05 - 17:15
	CEST
<i>Educational Sessions</i>	
16:15 - 17:15 CEST	R7
<b>Educational Session 12: Symptomatic treatment of MS</b>	
<i>Chair:</i> Jalesh Panicker, GB	
<i>Chair:</i> Frank Weber, DE	
<b>Introduction by chairs</b>	16:15 - 16:20
	CEST
<b>Neurourology</b>	16:20 - 16:35
<i>Speaker:</i> Jalesh Panicker, GB	CEST
<b>Spasticity</b>	16:35 - 16:50
<i>Speaker:</i> Frank Weber, DE	CEST
<b>Neuropathic pain</b>	16:50 - 17:05
<i>Speaker:</i> Xavier Moisset, FR	CEST
<b>Live discussion</b>	17:05 - 17:15
	CEST

**Friday, 12 November, 2021**

*Educational Sessions*  
15:00 - 16:00 CEST

R6

**Educational Session 13: Targeting progression and promotion of functional tissue recovery in the CSN**

*Chair:* Tanja Kuhlmann, DE

*Chair:* Martin Kerschensteiner, DE

<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>Reasons for impaired remyelination in multiple sclerosis: previous concepts revisited</b>	15:05 - 15:20 CEST
<i>Speaker:</i> Tanja Kuhlmann, DE	
<b>Neuroplasticity: its relevance for multiple sclerosis</b>	15:20 - 15:35 CEST
<i>Speaker:</i> Martin Kerschensteiner, DE	
<b>Lessons from recent and ongoing treatment trials in progressive MS</b>	15:35 - 15:50 CEST
<i>Speaker:</i> Robert J. Fox, US	
<b>Live discussion</b>	15:50 - 16:00 CEST

*Educational Sessions*  
15:00 - 16:00 CEST

R7

**Educational Session 14: Insights in neuropathology and diagnosis of NMOSD**

*Chair:* Christine Stadelmann-Nessler, DE

*Chair:* Romain Marignier, FR

<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>Neuropathology underlying NMOSD: Are AQP-4 antibody positive and negative cases one entity?</b>	15:05 - 15:20 CEST
<i>Speaker:</i> Christine Stadelmann-Nessler, DE	
<b>Diagnosis of NMOSD</b>	15:20 - 15:35 CEST
<i>Speaker:</i> Brian Weinshenker, US	
<b>Clinical spectrum of NMOSD: Common and rare manifestations</b>	15:35 - 15:50 CEST
<i>Speaker:</i> Romain Marignier, FR	
<b>Live discussion</b>	15:50 - 16:00 CEST

*Educational Sessions*  
16:15 - 17:15 CEST

R6

**Educational Session 15: Immunology of MS**

*Chair:* Mireia Sospedra Ramos, CH

*Chair:* Marco Prinz, DE

<b>Introduction by chairs</b>	16:15 - 16:20 CEST
<b>B cells and antibodies: the role of promoting inflammatory CNS demyelination</b>	16:20 - 16:35 CEST

*Scientific program**Speaker:* Markus Reindl, AT**T cells in multiple sclerosis: novel insights in immunopathogenesis**16:35 - 16:50  
CEST*Speaker:* Mireia Sospedra Ramos, CH**Innate immune cells in MS**16:50 - 17:05  
CEST**Live discussion**17:05 - 17:15  
CEST*Educational Sessions*

16:15 - 17:15 CEST

R7

**Educational Session 16: Old and new players in the treatment of NMOSD***Chair:* Kazuo Fujihara, JP*Chair:* Tania Kümpfel, DE**Introduction by chairs**16:15 - 16:20  
CEST**Treatment targets in NMOSD: A pathophysiological view**16:20 - 16:35  
CEST*Speaker:* Kazuo Fujihara, JP**Considerations for clinical trial design in rare diseases such as NMOSD**16:35 - 16:50  
CEST*Speaker:* Sean Pittock, US**Current standard of care and new emerging treatments in NMOSD**16:50 - 17:05  
CEST*Speaker:* Tania Kümpfel, DE**Live discussion**17:05 - 17:15  
CEST

**Friday, 26 November, 2021**

*Educational Sessions*  
15:00 - 16:00 CEST

R6

**Educational Session 17: Biomarkers in MS**

*Chair:* Jens Kuhle, CH

*Chair:* Charlotte Teunissen, NL

<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>NfL for prognostic and therapeutic follow up of patients with MS</b> <i>Speaker:</i> Jens Kuhle, CH	15:05 - 15:20 CEST
<b>Other blood biomarkers in MS</b> <i>Speaker:</i> Fredrik Piehl, SE	15:20 - 15:35 CEST
<b>CSF biomarkers in MS</b> <i>Speaker:</i> Charlotte Teunissen, NL	15:35 - 15:50 CEST
<b>Live discussion</b>	15:50 - 16:00 CEST

*Educational Sessions*  
15:00 - 16:00 CEST

R7

**Educational Session 18: Statistic evaluation of clinical and observational trials**

*Chair:* Maria Pia Sormani, IT

*Chair:* Florian Deisenhammer, AT

<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>Interpreting Propensity Score adjusted studies</b> <i>Speaker:</i> Maria Pia Sormani, IT	15:05 - 15:20 CEST
<b>Methods to analyse relapses and MRI lesions</b> <i>Speaker:</i> Brian Healy, US	15:20 - 15:35 CEST
<b>Statistical significance and clinical relevance</b> <i>Speaker:</i> Florian Deisenhammer, AT	15:35 - 15:50 CEST
<b>Live discussion</b>	15:50 - 16:00 CEST

*Educational Sessions*  
16:15 - 17:15 CEST

R6

**Educational Session 19: Visual outcomes in MS and NMOSD**

*Chair:* Letizia Leocani, IT

*Chair:* Angela Vidal-Jordana, ES

<b>Introduction by chairs</b>	16:15 - 16:20 CEST
<b>Visual evoked potentials in MS and NMOSD</b> <i>Speaker:</i> Letizia Leocani, IT	16:20 - 16:35 CEST
<b>OCT in MS and NMOSD</b> <i>Speaker:</i> Angela Vidal-Jordana, ES	16:35 - 16:50 CEST

*Scientific program*

<b>Functional and structural MR imaging of the visual system in MS and NMOSD</b>	16:50 - 17:05 CEST
<i>Speaker:</i> Friedemann Paul, DE	
<b>Live discussion</b>	17:05 - 17:15 CEST
<i>Educational Sessions</i>	
16:15 - 17:15 CEST	R7
<b>Educational Session 20: Specific aspects of MS rehabilitation</b>	
<i>Chair:</i> Jennifer Freeman, GB	
<i>Chair:</i> Peter Feys, BE	
<b>Introduction by chairs</b>	16:15 - 16:20 CEST
<b>Rehabilitation in progressive MS</b>	16:20 - 16:35 CEST
<i>Speaker:</i> Jennifer Freeman, GB	
<b>Assistive technologies/devices and robotics</b>	16:35 - 16:50 CEST
<i>Speaker:</i> Peter Feys, BE	
<b>Managing cognitive dysfunction</b>	16:50 - 17:05 CEST
<i>Speaker:</i> Aurélie Ruet, FR	
<b>Live discussion</b>	17:05 - 17:15 CEST



**Friday, 10 December, 2021**

*Educational Sessions*  
15:00 - 16:00 CEST

R6

**Educational Session 21: Animal models of MS**

*Chair:* Jennifer Gommerman, US

*Chair:* Roland Liblau, FR

<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>Phenotype and function of leukocytes in brain inflammation: discovery of new druggable pathways</b>	15:05 - 15:20 CEST
<i>Speaker:</i> Katerina Akassoglou, US	
<b>The regulation of neuroinflammation: from animal models to humans</b>	15:20 - 15:35 CEST
<i>Speaker:</i> Jennifer Gommerman, US	
<b>Treatment of multiple sclerosis: what can we learn from animal models</b>	15:35 - 15:50 CEST
<i>Speaker:</i> Roland Liblau, FR	
<b>Live discussion</b>	15:50 - 16:00 CEST

*Educational Sessions*  
15:00 - 16:00 CEST

R7

**Educational Session 22: From typical to atypical demyelination – the role of MRI in identifying MS and characterising its variants (MAGNIMS/ECTRIMS session)**

*Chair:* Christian Enzinger, AT

*Chair:* Olga Ciccarelli, GB

<b>Introduction by chairs</b>	15:00 - 15:05 CEST
<b>Brain MRI findings suggestive of demyelination but atypical for MS</b>	15:05 - 15:20 CEST
<i>Speaker:</i> Christian Enzinger, AT	
<b>Spinal cord MRI findings atypical for MS</b>	15:20 - 15:35 CEST
<i>Speaker:</i> Olga Ciccarelli, GB	
<b>New MRI techniques to characterise MS variants</b>	15:35 - 15:50 CEST
<i>Speaker:</i> Frederik Barkhof, NL	
<b>Live discussion</b>	15:50 - 16:00 CEST

*Educational Sessions*  
16:15 - 17:15 CEST

R6

**Educational Session 23: Immunological MOAs of novel MS DMTs**

*Chair:* Eva Kubala Havrdová, CZ

*Chair:* Amit Bar-Or, US

<b>Introduction by chairs</b>	16:15 - 16:20 CEST
<b>What does not work in multiple sclerosis: lessons from failed</b>	16:20 - 16:35

<b>clinical trials</b>	CEST
<i>Speaker:</i> Eva Kubala Havrdová, CZ	
<b>Treatment of progressive multiple sclerosis: potential new targets</b>	16:35 - 16:50 CEST
<i>Speaker:</i> V. Wee Yong, CA	
<b>MOA of BTK inhibitors</b>	16:50 - 17:05 CEST
<i>Speaker:</i> Amit Bar-Or, US	
<b>Live discussion</b>	17:05 - 17:15 CEST

*Educational Sessions*

16:15 - 17:15 CEST

R7

**Educational Session 24: Autoimmune demyelinating CNS diseases beside NMOSD and MOGAD***Chair:* Samia Khoury, LB*Chair:* Yael Hacoheh, GB

<b>Introduction by chairs</b>	16:15 - 16:20 CEST
<b>Clinical and neuroimaging features in rare CNS demyelinating diseases and systemic autoimmune diseases with CNS involvement</b>	16:20 - 16:35 CEST
<i>Speaker:</i> Dean M Wingerchuk, US	
<b>How useful are biomarkers for differential diagnosis in CNS demyelination? ACE, ANA &amp; co and their limitation</b>	16:35 - 16:50 CEST
<i>Speaker:</i> Samia Khoury, LB	
<b>Post-infectious and post-vaccination CNS demyelination</b>	16:50 - 17:05 CEST
<i>Speaker:</i> Yael Hacoheh, GB	
<b>Live discussion</b>	17:05 - 17:15 CEST