

**Wednesday, 26. October 2022**

Poster Session  
08:00 - 09:00

ePoster Area

**ePoster Session**

EP0800	<b>Diagnostic wandering in multiple sclerosis highlights the need for increased physicians' alertness</b>	08:00 - 08:00
EP0801	<b>Limited diagnostic utility of serologic testing in the evaluation for multiple sclerosis and its mimics: a single-center observational study</b>	08:00 - 08:00
EP0802	<b>Potential use of biomarkers in the family members of new untreated relapsing-remitting multiple sclerosis for early diagnosis of multiple sclerosis</b>	08:00 - 08:00
EP0803	<b>Blood platelet RNA as biomarker for the detection of early stage multiple sclerosis</b>	08:00 - 08:00
EP0804	<b>Leber hereditary optic neuropathy-plus syndrome mimicking a neuro-inflammatory disorder</b>	08:00 - 08:00
EP0805	<b>Anti-neurochondrin antibody as a potential biomarker in primary autoimmune cerebellar ataxia – a case report</b>	08:00 - 08:00
EP0806	<b>Validation of McDonald 2017 multiple sclerosis diagnostic criteria in patients with a first demyelinating event in Argentina</b>	08:00 - 08:00
EP0807	<b>Persistent central and peripheral nervous system inflammation following Johnson &amp; Johnson vaccine: a case series</b>	08:00 - 08:00
EP0808	<b>The prospective acute optic neuritis network</b>	08:00 - 08:00
EP0809	<b>Alternative diagnosis in first-line referral for suspected MS</b>	08:00 - 08:00
EP0810	<b>Onset of various CNS inflammatory demyelination diseases following COVID-19 vaccinations</b>	08:00 - 08:00
EP0811	<b>Motherhood choice in multiple sclerosis (MoMS) – feasibility and pilot study of two decision support programmes</b>	08:00 - 08:00
EP0812	<b>Anxiety and serum cortisol levels during pregnancy in multiple sclerosis: a prospective cohort study</b>	08:00 - 08:00
EP0813	<b>Situation of breastfeeding in multiple sclerosis – a questionnaire survey in Germany</b>	08:00 - 08:00
EP0814	<b>Perspectives of health care providers concerning current practice in supporting women with multiple sclerosis in reproduction and treatment decisions</b>	08:00 - 08:00
EP0815	<b>The UK MS pregnancy register: baseline data from the first 83 enrolled participants</b>	08:00 - 08:00
	<b>Sexual dysfunction in MS Brazilian patients</b>	08:00 - 08:00

EP0817	<b>MoCA test and SDMT to detect cognitive impairment in MS patients</b>	08:00 - 08:00
EP0818	<b>Modified fatigue impact scale criteria may not serve as a reliable predictor of neurogenic fatigue in patients with MS</b>	08:00 - 08:00
EP0819	<b>Characterization of prodromal symptoms in multiple sclerosis - a single-centre observational study</b>	08:00 - 08:00
EP0820	<b>A single center, open, non-controlled pilot investigation to evaluate the effects of intermittent negative pressure on spasticity and concomitant pain in patients with multiple sclerosis</b>	08:00 - 08:00
EP0821	<b>Physical and cognitive profile of elderly persons with multiple sclerosis and comparison with healthy controls</b>	08:00 - 08:00
EP0822	<b>Relationship between fatigue, disability, and reserve in patients with MS: a cross-sectional and longitudinal analysis</b>	08:00 - 08:00
EP0823	<b>Cognitive outcomes in MS: predictors at diagnosis</b>	08:00 - 08:00
EP0824	<b>Factors related to cognitive fatigability in persons with multiple sclerosis and differences between healthy controls</b>	08:00 - 08:00
EP0825	<b>The bladder control scale correlates more robustly with ambulatory disability than the bladder functional system score</b>	08:00 - 08:00
EP0826	<b>Analysis of color perception in multiple sclerosis patients</b>	08:00 - 08:00
EP0827	<b>Can the dual-task paradigm predict disability in persons with multiple sclerosis? Four-year follow-up study</b>	08:00 - 08:00
EP0828	<b>The isometric rate of force development of knee extensors is highly sensitive in the evaluation of lower extremity motor function in individuals with multiple sclerosis who do not have any associated clinical symptoms</b>	08:00 - 08:00
EP0829	<b>Multiple sclerosis, cognitive function and graph literacy in people with multiple sclerosis</b>	08:00 - 08:00
EP0830	<b>The rapid disability assessment for patients with relapsing forms of MS: a pilot study</b>	08:00 - 08:00
EP0831	<b>Sensor-based gait analysis using mobile phones is useful for the assessment of fatigue in patients with multiple sclerosis – a proof of concept study</b>	08:00 - 08:00
EP0832	<b>What do you need to complete the nine hole peg test?</b>	08:00 - 08:00
EP0833	<b>Multiple sclerosis and ambulation: the relationships of the timed up and go (TUG) to quantitative gait parameters during preferred walking speed and dual task walking</b>	08:00 - 08:00
EP0834	<b>Modified fatigue impact scale as proxy of motor disability changes over time</b>	08:00 - 08:00

EP0835	<b>Wireless sensor-based movement analysis is useful in detection of gait impairment within early stages of people with multiple sclerosis</b>	08:00 - 08:00
EP0836	<b>Trail making test could predict impairment in cognitive domains in patients with multiple sclerosis: a study of diagnostic accuracy</b>	08:00 - 08:00
EP0837	<b>Cognitive impairment and its trajectory in MS patients with different phenotypes: a 1-year longitudinal observational study</b>	08:00 - 08:00
EP0838	<b>Moving MS: activity profiles are linked with disability scores, a cross-sectional study</b>	08:00 - 08:00
EP0839	<b>The effect of the presence of cervical cord lesion on upper extremity function in newly diagnosed persons with multiple sclerosis</b>	08:00 - 08:00
EP0840	<b>Age related multiple sclerosis severity score in a Colombian population: data from clinical practice</b>	08:00 - 08:00
EP0841	<b>Six-spot step test with cognitive tasks: a proposed method to assess dual-task ability in people with multiple sclerosis</b>	08:00 - 08:00
EP0842	<b>Assessment of the relation between physical disability and trunk control, balance and pedobarographic parameters in persons with multiple sclerosis</b>	08:00 - 08:00
EP0843	<b>The COVID MS patients satisfaction survey (COVIMPSAT): COVID-19 outcomes in people with multiple sclerosis and the role of multiple sclerosis centers during the pandemic????</b>	08:00 - 08:00
EP0844	<b>Identifying hopelessness and associated factors in early-stage relapsing remitting multiple sclerosis</b>	08:00 - 08:00
EP0845	<b>Self-reported physical activity behavior in a MS cohort from the Saskatchewan MS drugs research program, Saskatchewan, Canada</b>	08:00 - 08:00
EP0846	<b>Influence of cognition and fatigue on the correlation between objective and subjective upper limb measures in people with multiple sclerosis</b>	08:00 - 08:00
EP0847	<b>Disability progression: can doctor and patient agree?</b>	08:00 - 08:00
EP0848	<b>Relapse activity and disability progression in COVID-vaccinated patients with multiple sclerosis: homologous vs. heterologous vaccination scheme</b>	08:00 - 08:00
EP0849	<b>Caring for the carer of people with multiple sclerosis</b>	08:00 - 08:00
EP0850	<b>Long-term unmet needs in multiple sclerosis</b>	08:00 - 08:00
EP0851	<b>Natalizumab-treated RRMS patients with prior DMT use report better outcomes, treatment satisfaction and unique benefits than similar patients treated with ocrelizumab</b>	08:00 - 08:00

EP0852	<b>Multiple sclerosis, graph literacy and perception of disease impact: performance versus patient perception of illness impact in people with multiple sclerosis</b>	08:00 - 08:00
EP0853	<b>COVID-19 influence on the progression of post-traumatic growth in multiple sclerosis</b>	08:00 - 08:00
EP0854	<b>How people benefit from doing patient and public involvement: a scoping review</b>	08:00 - 08:00
EP0855	<b>Communicating the relevance of neurodegeneration and brain atrophy to multiple sclerosis patients: patient, provider and researcher perspectives</b>	08:00 - 08:00
EP0856	<b>Patient-reported outcome measures as indicators of Progressive disease in multiple sclerosis: a “must” in the elaboration of a set of minimum relevant data in multiple sclerosis patient-centered healthcare</b>	08:00 - 08:00
EP0857	<b>Impact of the coronavirus SARS COV-2 (COVID19) pandemic on the quality of life and mood of patients with multiple sclerosis</b>	08:00 - 08:00
EP0858	<b>Resilience and perceived stress in recently diagnosed people with MS: relations with quality of life and psychosocial outcomes</b>	08:00 - 08:00
EP0859	<b>Functional outcomes in highly-active multiple sclerosis after diagnosis</b>	08:00 - 08:00
EP0860	<b>Towards a self-assessment of autonomy for patients with multiple sclerosis</b>	08:00 - 08:00
EP0861	<b>Improving health literacy in MS through a multidisciplinary brain health program</b>	08:00 - 08:00
EP0862	<b>Association between resilience and total T2 lesion volume on brain MRI in young patients with multiple sclerosis</b>	08:00 - 08:00
EP0863	<b>VEP score of the left eye had predictive value for reaching better outcome of treating patients with multiple sclerosis over ten years</b>	08:00 - 08:00
EP0864	<b>Caregiver burden and associated factors among caregivers of persons with multiple sclerosis: application of a specific instrument</b>	08:00 - 08:00
EP0865	<b>Assessing the impact of US patient support programmes on relapsing-remitting MS patients on dimethyl fumarate</b>	08:00 - 08:00
EP0866	<b>One year with siponimod: a case series with unexpected improvement of spastic bladder</b>	08:00 - 08:00
EP0867	<b>Social media use and its impact on stigma, coping, and quality of life in patients with multiple sclerosis</b>	08:00 - 08:00
EP0868	<b>Socioeconomic influence on DMT prescribing strategies</b>	08:00 - 08:00

EP0869	<b>Clinical and economic burden of comorbidities in multiple sclerosis</b>	08:00 - 08:00
EP0870	<b>The impact of cognitive impairment on disease burden in Chinese patients with multiple sclerosis: a model simulation study</b>	08:00 - 08:00
EP0871	<b>Determination of the main reason for work difficulties in persons with multiple sclerosis: physical disability or social cognitive function</b>	08:00 - 08:00
EP0872	<b>The evolution of internuclear ophthalmoparesis in multiple sclerosis: a one year follow-up study</b>	08:00 - 08:00
EP0873	<b>Clinical and paraclinical characteristics of optic neuritis in the context of the McDonald criteria 2017</b>	08:00 - 08:00
EP0874	<b>Comorbidities in colombian patients with multiple sclerosis</b>	08:00 - 08:00
EP0875	<b>Exploring COVID-19 vaccine uptake, hesitancy, and disease-related beliefs in people with multiple sclerosis</b>	08:00 - 08:00
EP0876	<b>Blood pressure variability is altered in secondary progressive multiple sclerosis but not in patients with clinically isolated syndrome</b>	08:00 - 08:00
EP0877	<b>Assessment of prevalence of diabetes mellitus according to the serum level of hemoglobin A1C in patients with multiple sclerosis; a case-control study</b>	08:00 - 08:00
EP0878	<b>COVID-19 and its outcomes in multiple sclerosis patients</b>	08:00 - 08:00
EP0879	<b>Older patients with multiple sclerosis have greater enlargement of the brain ventricles following COVID-19</b>	08:00 - 08:00
EP0880	<b>Combined implications of ageing and multiple sclerosis on bone health: a systematic review</b>	08:00 - 08:00
EP0881	<b>Occipital neuralgia in multiple sclerosis patients: a tertiary center experience in Turkey</b>	08:00 - 08:00
EP0882	<b>Addressing the MS care paradox: practical solutions</b>	08:00 - 08:00
EP0883	<b>MSGo, a digital support program for multiple sclerosis patients in Australia using novartis disease modifying therapies</b>	08:00 - 08:00
EP0884	<b>Demographic patterns of MS patients using BRISA—an MS specific app in Germany</b>	08:00 - 08:00
EP0885	<b>Exploring the utility of ActiGraph in measuring gait impairment and physical activity in patients with MS using digital biomarkers</b>	08:00 - 08:00
EP0886	<b>A prospective study of the feasibility of smartphone-based self-monitoring to characterise cognitive and neurological impairment in people with multiple sclerosis: Floodlight MS</b>	08:00 - 08:00

	<b>moreactive</b>	
EP0887	<b>Satisfaction with remote visits for people with multiple sclerosis: The TELE MS randomized controlled trial</b>	08:00 - 08:00
EP0888	<b>Digital symbol-digit modalities test with modified protocols in patients with CNS demyelinating diseases: feasibility and patient preference</b>	08:00 - 08:00
EP0889	<b>Characterization of the transcriptional response of human brain derived endothelial cells to pro-inflammatory cytokines IFN<math>\gamma</math> and TNF<math>\alpha</math> <i>in vitro</i></b>	08:00 - 08:00
EP0890	<b>Early signs of myelin degeneration in the diffusely abnormal white matter in MS</b>	08:00 - 08:00
EP0891	<b>Profiling MS with MS: utilization of mass spectrometry imaging to profile molecular expression during MS progression</b>	08:00 - 08:00
EP0892	<b>Association between brain volume and blood lipids changes in multiple sclerosis patients: a large sample size real-world study</b>	08:00 - 08:00
EP0893	<b>Ultrastructural analysis of myelinated axons in normal appearing white matter in multiple sclerosis reveals reduced axon density without alterations in axon area and g-ratio</b>	08:00 - 08:00
EP0894	<b>In vitro model for investigating the effect of patient-derived multiple sclerosis monocytes on cellular-scale cortical network function</b>	08:00 - 08:00
EP0895	<b>Chronology of chitinase 3-like-1 (CHI3L1) expression in early and late lesions in a marmoset EAE model</b>	08:00 - 08:00
EP0896	<b>Remibrutinib, a novel Bruton tyrosine kinase inhibitor, exhibits improved target selectivity and potency <i>in vitro</i></b>	08:00 - 08:00
EP0897	<b>Inducible nitric oxide synthase deficiency leads to early and severe demyelination in a murine coronavirus induced disease model of multiple sclerosis</b>	08:00 - 08:00
EP0898	<b>Neuromyelitis optica spectrum disorders in an argentinian cohort: a hospital-based study</b>	08:00 - 08:00
EP0899	<b>Drawing the road map for the future pandemic with what we learned from the COVID-19 in neuromyelitis optica spectrum disorder: a large cohort study</b>	08:00 - 08:00
EP0900	<b>IL-6 as a Blood Biomarker in NMOSD patients: a positive correlation between clinical status and imaging to IL-6 serum levels</b>	08:00 - 08:00
EP0901	<b>Understanding the symptoms of patients with neuromyelitis optica spectrum disorder and their impact on patients' lives: a qualitative interview study</b>	08:00 - 08:00
EP0902	<b>Atypical polyphasic presentation of autoimmune glial fibrillary</b>	08:00 - 08:00

	<b>acidic protein (GFAP) astrocytopathy</b>	
EP0903	<b>Neuromyelitis optica spectrum disorders with and without associated autoimmune diseases</b>	08:00 - 08:00
EP0904	<b>Two years follow up study of the psychological effect of COVID19 pandemic on neuromyelitis optica spectrum disorder patients , the dramatic effect of vaccination</b>	08:00 - 08:00
EP0905	<b>Therapeutic strategies of rituximab in NMOSD and MOGAD patients: multicenter cohort study in Latin America</b>	08:00 - 08:00
EP0906	<b>The effect of health-related hardiness education program in patients with neuromyelitis optica</b>	08:00 - 08:00
EP0907	<b>Rheumatological comorbidities and autoantibodies in NMOSD and MOGAD</b>	08:00 - 08:00
EP0908	<b>Cognitive and physical profile of the persons with neuromyelitis optica spectrum disorder</b>	08:00 - 08:00
EP0909	<b>Access to NMOSD care in an Argentinean cohort: real world patient experiences</b>	08:00 - 08:00
EP0910	<b>Breakthrough COVID-19 infection after vaccination in patients with NMOSD in Latin America: data from RELACOEM registry</b>	08:00 - 08:00
EP0911	<b>Development and validation of a claims-based algorithm to identify patients with neuromyelitis optica spectrum disorder</b>	08:00 - 08:00
EP0912	<b>?-interferon treatment is a potent and targeted epigenetic modifier in multiple sclerosis</b>	08:00 - 08:00
EP0913	<b>Exploring the role of expanded tandem repeat sequences in multiple sclerosis progression</b>	08:00 - 08:00
EP0914	<b>Epigenetic profiling of blood in multiple sclerosis: a closer look at lipid mediator machinery gene regulation</b>	08:00 - 08:00
EP0915	<b>CD4<sup>+</sup> T cell gene expression profile of relapsing-remitting multiple sclerosis patients reveals a dysregulated nuclear receptor signalling</b>	08:00 - 08:00
EP0916	<b>Non-coding circular RNA genomewide profiling in MS reveals a pathogenic circuit disrupting B cells</b>	08:00 - 08:00
EP0917	<b>Establishing the CNS distribution of genes implicated in multiple sclerosis progression</b>	08:00 - 08:00
EP0918	<b>Micro-RNA-22 secreted from microglial exosomes is a major regulator of oligodendrocyte differentiation</b>	08:00 - 08:00
EP0919	<b>The CXCL8 rs2227306 polymorphism influences central inflammation and cortical thickness in early multiple sclerosis</b>	08:00 - 08:00
EP0920	<b>Initiation of ocrelizumab in patients with relapsing multiple</b>	08:00 - 08:00

	<b>sclerosis is associated with a broad immunomodulatory response implicating proinflammatory T-cells: a multi-omics study</b>	
EP0921	<b>Genetic variation in <i>GLA</i> elucidates a link between Fabry Disease and Multiple Sclerosis in Sweden</b>	08:00 - 08:00
EP0922	<b>COVID-19 antibody response after two doses of SARS-CoV-2 vaccines in multiple sclerosis patients; an update to the previous study</b>	08:00 - 08:00
EP0923	<b>Comparative single-cell meta-analysis of leukocytes in the CSF and parenchyma of MS patients</b>	08:00 - 08:00
EP0924	<b>Humoral immune response to SARS-CoV-2 booster vaccination in patients with multiple sclerosis and healthy controls: a prospective multicenter study</b>	08:00 - 08:00
EP0925	<b>Immunophenotyping human cerebrospinal fluid: CXCL10 and neurofilament light chain levels correlate with CSF immune cell subsets and provide pathophysiological relevance in multiple sclerosis</b>	08:00 - 08:00
EP0926	<b>Glucocorticoid treatment increases A20 expression and decreases NF-<math>\kappa</math>B pathway activation in MOGAD and healthy control CD4<sup>+</sup> T cells in vitro</b>	08:00 - 08:00
EP0927	<b>Characterization of accelerated immunosenescence in multiple sclerosis through the analysis of immunological cell populations</b>	08:00 - 08:00
EP0928	<b>Cerebrospinal fluid of Progressive multiple sclerosis patients reduces differentiation and immune functions of oligodendrocyte progenitor cells</b>	08:00 - 08:00
EP0929	<b>Safety and efficacy of a third booster dose of BNT162b2 mRNA Covid-19 vaccine in patients with multiple sclerosis treated with ocrelizumab or fingolimod</b>	08:00 - 08:00
EP0930	<b>CLADRIPLAS: Does cladribine Target CNS plasma cells and reduce neuro-axonal damage in people with MS?</b>	08:00 - 08:00
EP0931	<b>Divergent complement system activation in two clinically distinct murine models of multiple sclerosis</b>	08:00 - 08:00
EP0932	<b>The role of the mannose receptor C type 2 in migration of peripheral blood mononuclear cells across brain endothelial cells</b>	08:00 - 08:00
EP0933	<b>Targeting myeloid-derived suppressor cells via miR-223, in alternative to glucocorticoids, in multiple sclerosis</b>	08:00 - 08:00
EP0934	<b>Perturbed mitochondrial respiratory activity in the different clinical forms of multiple sclerosis</b>	08:00 - 08:00
EP0935	<b>In-depth analysis of cerebro-spinal fluid CD4<sup>+</sup> t cells in multiple</b>	08:00 - 08:00



	<b>sclerosis and controls reveals disease-associated subpopulations</b>	
EP0936	<b>Immune-mediated CNS injury in a young woman - a case report from Uzbekistan</b>	08:00 - 08:00
EP0937	<b>The role of 5-HT<sub>2B</sub>-receptor in the fluoxetine mediated macrophages-induced Th17-immune response in multiple sclerosis</b>	08:00 - 08:00
EP0938	<b>Methionine intake modulates neuroinflammatory and neurodegenerative processes in murine models of multiple sclerosis</b>	08:00 - 08:00
EP0939	<b>Investigating the relationship between Siponimod efficacy in secondary progressive multiple sclerosis and pathogenic Th cell populations</b>	08:00 - 08:00
EP0940	<b>Gene expression and immune repertoire: intraindividual stability throughout the cryopreservation process</b>	08:00 - 08:00
EP0941	<b>Immune response against SARS-CoV-2 vaccines in treatment-naive multiple sclerosis patients</b>	08:00 - 08:00
EP0942	<b>Covid-19 vaccination can induce multiple sclerosis via cross-reactive CD4+ T cells recognizing SARS-CoV-2 spike protein and myelin peptides</b>	08:00 - 08:00
EP0943	<b>Serum antiviral antibody titers in multiple sclerosis patients after six months under teriflunomide treatment and their clinical implications: a longitudinal study</b>	08:00 - 08:00
EP0944	<b>Serum 3-phenyllactic acid level is reduced in benign multiple sclerosis and is associated with effector B cell ratios</b>	08:00 - 08:00
EP0945	<b>Extracellular vesicles isolated from probiotics activate human T cells and modulate immune response on multiple sclerosis patients and controls</b>	08:00 - 08:00
EP0946	<b>Effectiveness of BBIBP-CorV vaccine in preventing SARS-CoV2 infection and severe outcomes in patients with multiple sclerosis</b>	08:00 - 08:00
EP0947	<b>SPMS patients-derived gut bacterial strain accelerates neuronal inflammation via intestinal Th17 cells</b>	08:00 - 08:00
EP0948	<b>Antibody response after a booster dose of SARS-CoV2 vaccines in multiple sclerosis</b>	08:00 - 08:00
EP0949	<b>Socioeconomic status is associated with amygdala microstructure in early onset multiple sclerosis</b>	08:00 - 08:00
EP0950	<b>Visual function influence on non-visual manifestations in EAE</b>	08:00 - 08:00
EP0951	<b>Sun exposure and the risk of progressive-onset multiple sclerosis</b>	08:00 - 08:00

EP0952	<b>Exploring the association between diet and the human gut microbiome diversity in patients with multiple sclerosis</b> <i>Speaker:</i> Moschoula Passali, DK	08:00 - 08:00
EP0953	<b>Epstein Barr virus infection and the risk of multiple sclerosis in Argentina</b>	08:00 - 08:00
EP0954	<b>Drug substance and alcohol consumption and the risk of primary progressive multiple sclerosis: a population-based case-control study</b>	08:00 - 08:00
EP0955	<b>XCL1 a serum biomarker in neurological diseases; HTLV-1-associated myelopathy/tropical spastic paraparesis and multiple sclerosis</b>	08:00 - 08:00
EP0956	<b>Oxygen concentrations impact reactive astrogliosis, this is evidenced by a decrease in the expression of inflammatory astrocyte markers and differential secretion of chemokines and cytokines by reactive astrocytes</b>	08:00 - 08:00
EP0957	<b>Investigating the role of astrocytes for the survival of axons in chronic inflammatory lesions</b>	08:00 - 08:00
EP0958	<b>Familial and sporadic multiple sclerosis: axonal and neuronal changes of the retina</b>	08:00 - 08:00
EP0959	<b>Preferential degeneration of the peripheral nervous system in lower versus upper limb of persons with multiple sclerosis – implications for neuromuscular function and physical function</b>	08:00 - 08:00
EP0960	<b>Neurodegeneration quantitative systems pharmacology modelling for analysis of multiple sclerosis therapy</b>	08:00 - 08:00
EP0961	<b>Secondary progressive multiple sclerosis: <i>in vitro</i> effect of cerebrospinal fluid on human neural stem cells behavior and immunomodulatory molecules production</b>	08:00 - 08:00
EP0962	<b>Percentage Brain volume change primarily reflects white matter and cortical atrophy</b>	08:00 - 08:00
EP0963	<b>Exploring the association between iron rims in MS lesions, mood disorders, fatigue and cognition</b>	08:00 - 08:00
EP0964	<b>Quantitative multi-parameter mapping in myelin oligodendrocyte glycoprotein IgG-associated disease and neuromyelitis optica spectrum disorders</b>	08:00 - 08:00
EP0965	<b>A novel clinical diffusion magnetic resonance imaging protocol to simultaneously dissect brain grey and white matter microstructure</b>	08:00 - 08:00
EP0966	<b>Reducing acquisition time in diffusion MRI sequences: a DTI and NODDI white matter tract study</b>	08:00 - 08:00
EP0967	<b>Prevalence of whole and regional brain atrophy in newly diagnosed relapsing-remitting MS patients</b>	08:00 - 08:00

EP0968	<b>Depression and prefrontal metabolism explain unique variability in processing speed ability in multiple sclerosis: a calibrated fMRI study</b>	08:00 - 08:00
EP0969	<b>Predictors of long-term disability in MS patients using routine MRI data: a 15-year retrospective study</b>	08:00 - 08:00
EP0970	<b>Tracking longitudinal change in Brain volumes through conditional quantiles</b>	08:00 - 08:00
EP0971	<b>QSM in MS shows large regional susceptibility differences but is constant over time</b>	08:00 - 08:00
EP0972	<b>brain white matter tractography in MS tremor patients</b>	08:00 - 08:00
EP0973	<b>The Central Vein Sign to differentiate multiple sclerosis from migraine</b>	08:00 - 08:00
EP0974	<b>The brain-age paradigm and clinical outcomes in multiple sclerosis</b>	08:00 - 08:00
EP0975	<b>The role of RIM lesions in predicting longitudinal brain and retinal atrophy</b>	08:00 - 08:00
EP0976	<b>Automatic estimation of brain parenchymal fraction in patients with multiple sclerosis: comparison between Synthetic MRI and FSL</b>	08:00 - 08:00
EP0977	<b>Spinal Cord Reserve: Validation of cervical cord canal estimations using brain and spinal cord volumetric MRI in a prospective cohort of multiple sclerosis patients</b>	08:00 - 08:00
EP0978	<b>Unsupervised clustering of acute multiple sclerosis lesions across spatial, geometric and textural domains</b>	08:00 - 08:00
EP0979	<b>Cerebellar atrophy and cognitive function in multiple sclerosis: does it matter?</b>	08:00 - 08:00
EP0980	<b>A 5-year longitudinal study identifies multi-modal brain MRI signatures that predict cognitive decline in an Australian multiple sclerosis cohort</b>	08:00 - 08:00
EP0981	<b>Cross-sectional and longitudinal comparative analyses of Brain volumes in MOGAD, NMOSD, and MS</b>	08:00 - 08:00
EP0982	<b>Structural brain topology differences in African-American and Caucasian patients with MS: bridging the inclusivity gap in advanced neuroimaging studies</b>	08:00 - 08:00
EP0983	<b>Wave-CAIPI is an efficient and sensitive method for paramagnetic rim lesion detection</b>	08:00 - 08:00
EP0984	<b>Advanced track-profiling diffusion- &amp; myelin-based MRI detects anomalies in MS patients from a normative control reference</b>	08:00 - 08:00
EP0985	<b>Development of an unsupervised, automated segmentation</b>	08:00 - 08:00

	<b>algorithm for enlarged perivascular spaces on 7 tesla magnetic resonance imaging</b>	
EP0986	<b>Lack of functional reorganization in the early stages of multiple sclerosis may result in cognitive impairment</b>	08:00 - 08:00
EP0987	<b>Brain charts for people living with multiple sclerosis</b>	08:00 - 08:00
EP0988	<b>Differences in N-acetylaspartate concentration in the spinal cord confirm heterogeneity of the double antibody-negative cohort of patients with NMOSD features</b>	08:00 - 08:00
EP0989	<b>Exploring pathological processes in RRMS with synthetic magnetic resonance imaging</b>	08:00 - 08:00
EP0990	<b>brain predicted age difference in myelin oligodendrocyte glycoprotein and aquaporin-4 disease</b>	08:00 - 08:00
EP0991	<b>Digit Span tests are more sensitive than SDMT to measure cognitive dysfunction and correlate with metabolic dearrangement of deep gray matter nuclei in multiple sclerosis – <i>in vivo</i> MR-spectroscopic study</b>	08:00 - 08:00
EP0992	<b>Baseline MRI characteristics of multiple sclerosis patients enrolled in two phase 2 studies of elezanumab</b>	08:00 - 08:00
EP0993	<b>Longitudinal assessment of changes in cerebral white matter integrity in MOGAD patients</b>	08:00 - 08:00
EP0994	<b>Quantitative susceptibility mapping in multiple sclerosis: a systematic review</b>	08:00 - 08:00
EP0995	<b>Clinical and MRI outcomes in pediatric-onset MS patients on ocrelizumab and fingolimod</b>	08:00 - 08:00
EP0996	<b>Probing brain microstructural connectivity in patients with early multiple sclerosis using diffusion weighted MRI</b>	08:00 - 08:00
EP0997	<b>AI-based characterisation of multiple sclerosis clinical symptomatology using lesion parenchymal fraction: consistency with the topographical model of MS</b>	08:00 - 08:00
EP0998	<b>Diffuse white matter pathology in multiple sclerosis and effect of treatment with dimethyl fumarate – a three year longitudinal study of normal appearing white matter using magnetic resonance spectroscopy</b>	08:00 - 08:00
EP0999	<b>Detection of MS lesions helps to predict MS disease using artificial intelligence</b>	08:00 - 08:00
EP1000	<b>Tumefactive demyelinating lesion with MOG antibodies preceding late-infantile metachromatic leukodystrophy</b>	08:00 - 08:00
EP1001	<b>Study design: the impact of quantitative structured MRI reports on clinical decision making in MS</b>	08:00 - 08:00

EP1002	<b>The evolving pattern of cerebellum atrophy in multiple sclerosis patients treated with natalizumab and its impact on cognition and physical disability</b>	08:00 - 08:00
EP1003	<b>Infratentorial lesions as predictors of Long-term disability in clinically isolated syndrome</b>	08:00 - 08:00
EP1004	<b>Evaluation of the relationship of social cognition with structural magnetic resonance imaging measurements in persons with multiple sclerosis</b>	08:00 - 08:00
EP1005	<b>Imaging glial activation and oxidative stress in Progressive MS</b>	08:00 - 08:00
EP1006	<b>Accelerated brain volume loss in patients with multiple sclerosis: do real-world observations align with standardized research findings?</b>	08:00 - 08:00
EP1007	<b>Thalamic radiomics to predict symbol digit modalities test performance in multiple sclerosis</b>	08:00 - 08:00
EP1008	<b>Machine learning parcellation of multiple sclerosis lesions into texturally consistent super-voxels for lesion classification</b>	08:00 - 08:00
EP1009	<b>Magnetization transfer imaging of the whole spinal cord in multiple sclerosis patients</b>	08:00 - 08:00
EP1010	<b>Improving automated lesion segmentation using intensity constraints: the cleaning step</b>	08:00 - 08:00
EP1011	<b>Hyperreflective foci in the outer nuclear layer of the retina in relapsing remitting multiple sclerosis</b>	08:00 - 08:00
EP1012	<b>Could be related the RFNL thinning as a predictive for multiple sclerosis severity?</b>	08:00 - 08:00
EP1013	<b>Association of retinal nerve fiber layer thickness, corpus callosum index and EDSS in multiple sclerosis</b>	08:00 - 08:00
EP1014	<b>Optical coherence tomography angiography in MS patients</b>	08:00 - 08:00
EP1015	<b>Optical coherence tomography angiography as a measure of dynamic retinal vascular changes in early demyelinating disease: 6 month follow up</b>	08:00 - 08:00
EP1016	<b>Retinal degeneration in multiple sclerosis and myelin oligodendrocyte glycoprotein-associated disease: a comparative longitudinal Italian OCT study</b>	08:00 - 08:00
EP1017	<b>Do overweight and obesity fuel kynurenine pathway overactivation in persons with MS? A cross-sectional study</b>	08:00 - 08:00
EP1018	<b>Could high sensitivity ELISA method be an option to determinate serum neurofilaments in patients with multiple sclerosis?</b>	08:00 - 08:00
EP1019	<b>Glial fibrillary acidic protein and multiple sclerosis progression</b>	08:00 - 08:00

	<b>independent of acute inflammation?????</b>	
EP1020	<b>NFL as a predictor of GdE lesions in patients with relapsing multiple sclerosis treated with ozanimod in the phase 2 RADIANCE trial</b>	08:00 - 08:00
EP1021	<b>Evobrutinib, a Bruton's tyrosine kinase inhibitor, decreases neurofilament light chain levels over 2.5 years of treatment in patients with relapsing multiple sclerosis</b>	08:00 - 08:00
EP1022	<b>Myeloid-derived suppressor cells are good biomarkers of fingolimod efficacy in multiple sclerosis</b>	08:00 - 08:00
EP1023	<b>Monitoring of treatment with dimethylfumarate using microRNAs as biomarkers in people with multiple sclerosis</b>	08:00 - 08:00
EP1024	<b>Impact of 2015 neuromyelitis optic spectrum disorders consensus diagnostic criteria and neurofilament light chain levels as biomarker of severity according to the presence of anti-AQP-4 and anti-MOG</b>	08:00 - 08:00
EP1025	<b>Plasma neurofilament light chain and glial fibrillary acidic protein levels correlate and are elevated in people with progressive multiple sclerosis</b>	08:00 - 08:00
EP1026	<b>Matched plasma modification for calculating a disease activity score in a serum-validated multivariate proteomic multiple sclerosis disease activity test</b>	08:00 - 08:00
EP1027	<b>Exploring the relationship between serum GDF-15 and disease stability in patients with a first clinical demyelinating event treated with subcutaneous interferon <math>\gamma</math>-1A or placebo in the REFLEX study</b>	08:00 - 08:00
EP1028	<b>Cerebrospinal fluid biomarkers of early worsening in primary progressive multiple sclerosis</b>	08:00 - 08:00
EP1029	<b>Circulating myeloid-derived suppressor cells as a potential biomarker of an anti-inflammatory T-cell balance associated with improved relapse recovery in multiple sclerosis</b>	08:00 - 08:00
EP1030	<b>High neurofilament level in neuromyelitis optica spectrum disorder AQP4 (+) Patient associated to chronic hepatitis c</b>	08:00 - 08:00
EP1031	<b>A stable cohort of relapsing remitting multiple sclerosis (RRMS) has reduced tetrahydrobiopterin (BH4) In plasma</b>	08:00 - 08:00
EP1032	<b>Oligoclonal M bands is a risk factor to early secondary progressive multiple sclerosis from a clinically isolated syndrome. A 12 years follow-up study</b>	08:00 - 08:00
EP1033	<b>Dimethyl fumarate's transcriptional signature in peripheral blood mononuclear cells of multiple sclerosis-treated patients and its association with clinical response in a 2-year follow-up study</b>	08:00 - 08:00

EP1034	<b>Longitudinal testing with a multivariate blood serum biomarker panel for multiple sclerosis disease activity: patterns of results in a real-world clinical setting</b>	08:00 - 08:00
EP1035	<b>The intrathecal levels of osteopontin associate with cortical damage accumulation and disease activity in early multiple sclerosis</b>	08:00 - 08:00
EP1036	<b>K index utility as quantitative biomarker in multiple sclerosis: determination of diagnostic and prognostic cut-offs</b>	08:00 - 08:00
EP1037	<b>Evaluating large scale proteomic changes in cerebrospinal fluid of multiple sclerosis patients</b>	08:00 - 08:00
EP1038	<b>Distinguishing disease activity in multiple sclerosis by analysis of intrathecally produced inflammatory and CNS injury targets</b>	08:00 - 08:00
EP1039	<b>Positive MRZ reaction differentiates multiple sclerosis from MOG antibody-associated autoimmune disease</b>	08:00 - 08:00
EP1040	<b>Meteoroid: a randomised, double-blind, placebo-controlled, multicentre phase 3 study of satralizumab in patients with myelin oligodendrocyte glycoprotein antibody-associated disease</b>	08:00 - 08:00
EP1041	<b>Myelin oligodendrocyte glycoprotein antibody disease associated with intracranial hypertension: an algerian series.</b>	08:00 - 08:00
EP1042	<b>Association of kappa and lambda free light chain indices with disease activity determined by No Evident Disease Activity (NEDA) in multiple sclerosis</b>	08:00 - 08:00
EP1043	<b>Cognitive function, MRI Brain volume and optical coherence tomography in young and elderly patients with multiple sclerosis</b>	08:00 - 08:00
EP1044	<b>Anti-CD20 therapies decrease humoral immune response to SARS-CoV-2 vaccine in a cohort of patients with multiple sclerosis</b>	08:00 - 08:00
EP1045	<b>Objective speech metrics in MS: a longitudinal study</b>	08:00 - 08:00
EP1046	<b>Using MEG to probe effects of pediatric ADS and MOG-Ab disease on functional networks and subsequent cognitive outcomes</b>	08:00 - 08:00
EP1047	<b>Nasal anti-CD3 monoclonal antibody (Foralumab) reduces PET microglial activation and blood inflammatory biomarkers in two patients with non-active secondary progressive MS</b>	08:00 - 08:00
EP1048	<b>Effects of anti-CD20 monoclonal antibody therapy on cerebrospinal fluid B cell subsets in relapsing-remitting multiple sclerosis</b>	08:00 - 08:00
EP1049	<b>Demographics and baseline disease characteristics of patients with relapsing multiple sclerosis from Kenya participating in the</b>	08:00 - 08:00

**CHIMES trial**

EP1050	<b>Evaluation of the use of High Efficacy Treatments (HETs) in patients with relapsing remitting multiple sclerosis in Argentina</b>	08:00 - 08:00
EP1051	<b>Effectiveness of cladribine in a Portuguese real-world population</b>	08:00 - 08:00
EP1052	<b>Longitudinal study of humoral and cellular responses to COVID-19 mRNA vaccines with and without 3rd ("booster") dose in MS patients on ocrelizumab: 24-week results from VIOLA (NCT04843774)</b>	08:00 - 08:00
EP1053	<b>A changing target - adapting ongoing autologous haematopoietic stem cell transplantation clinical trials to evolving clinical practice in the treatment of highly active relapsing remitting multiple sclerosis</b>	08:00 - 08:00
EP1054	<b>Wearing off phenomenon in MS patients in treatment with monoclonal antibodies: clinical and biological implications</b>	08:00 - 08:00
EP1055	<b>Real-world experience switching from high-efficacy infusions to cladribine tablets</b>	08:00 - 08:00
EP1056	<b>Intrathecal methotrexate treatment for progressive forms of multiple sclerosis</b>	08:00 - 08:00
EP1057	<b>A Norwegian prospective randomized open-label blinded endpoint multicentre non-inferiority study of oral cladribine and rituximab in multiple sclerosis (NOR-MS) - baseline patient data</b>	08:00 - 08:00
EP1058	<b>Defining post-translational modifications of deoxycytidine kinase to predict lymphocyte response to cladribine treatment using mass spectrometry</b>	08:00 - 08:00
EP1059	<b>Ocrelizumab extended interval dosing in multiple sclerosis during SARS-CoV-2 pandemic: a real-world experience</b>	08:00 - 08:00
EP1060	<b>CLADCOMS - CLADribine tablets long-term Control Of MS – a post-marketing investigator driven study</b>	08:00 - 08:00
EP1061	<b>Longitudinal quantification of neutralising antibodies after two doses of SARS-CoV-2 mRNA vaccine in MS, NMOSD and other neuroimmunological diseases</b>	08:00 - 08:00
EP1062	<b>Tumefactive demyelinating lesions in multiple sclerosis 24 months after the 2nd cycle of alemtuzumab: changes in immune cell populations and candidate biomarkers</b>	08:00 - 08:00
EP1063	<b>Rapid onset of effect on various immune cell subpopulations after treatment initiation with cladribine and ocrelizumab</b>	08:00 - 08:00
EP1064	<b>A Long term post-marketing observational monocentric study of a population of patients treated with dimethyl fumarate</b>	08:00 - 08:00
EP1065	<b>The effect of cladribine versus fingolimod on clinical and MRI</b>	08:00 - 08:00



	<b>measures in relapsing remitting multiple sclerosis</b>	
EP1066	<b>Preliminary data of a multicenter observational study on real-life experience with cladribine in naïve patients</b>	08:00 - 08:00
EP1067	<b>Secondary bile acids taurodeoxycholic acid and glycodeoxycholic acid dampen primary murine microglia activation</b>	08:00 - 08:00
EP1068	<b>Safety and efficacy of cladribine therapy following a treatment with anti-CD20 compounds in relapsing multiple sclerosis patients: a pilot study</b>	08:00 - 08:00
EP1069	<b>Natalizumab extended-interval dosing in a real-life context: efficacy study</b>	08:00 - 08:00
EP1070	<b>Unmet need of current disease-modifying treatments reported by physicians in patients with nonactive secondary progressive multiple sclerosis in the United States</b>	08:00 - 08:00
EP1071	<b>Impact of ozanimod on absolute lymphocyte count and recovery in patients with relapsing multiple sclerosis</b>	08:00 - 08:00
EP1072	<b>Treatment patterns and therapy selection drivers comparison between S1P agents among multiple sclerosis patients who recently switched disease-modifying therapies</b>	08:00 - 08:00
EP1073	<b>A real world multi centre study on efficacy and safety of natalizumab in indian patients with multiple sclerosis</b>	08:00 - 08:00
EP1074	<b>Impact of COVID-19 infection and COVID vaccinations on the management of MS and related disorders in a low middle income country - real world experience from a demyelinating disease registry</b>	08:00 - 08:00
EP1075	<b><i>Centella asiatica</i> increases cortical mitochondrial oxidative respiration and antioxidant gene expression, and reduces spinal cord inflammation in experimental autoimmune encephalomyelitis</b>	08:00 - 08:00
EP1076	<b>Preventive effects of ponesimod on cingulum demyelination</b>	08:00 - 08:00
EP1077	<b>Combining remyelination and immunosuppression for multiple sclerosis therapy</b>	08:00 - 08:00
EP1078	<b>Clinical effectiveness and safety of dimethyl fumarate for patients treated at least 6 years in the swedish post-market surveillance study “immunomodulation and multiple sclerosis epidemiology 5” (IMSE 5)</b>	08:00 - 08:00
EP1079	<b>Evolution of the RebiSmart®autoinjector device in support of adherence to subcutaneous interferon beta-1a therapy for relapsing multiple sclerosis</b>	08:00 - 08:00
EP1080	<b>Reconstitution of lymphocytes following discontinuation of dimethyl fumarate (DMF) due to lymphopenia in the swedish</b>	08:00 - 08:00

	<b>post-market surveillance study “immunomodulation and multiple sclerosis epidemiology 5” (IMSE 5)</b>	
EP1081	<b>Real-world data of ocrelizumab effects on disability progression; A 2-year follow-up study</b>	08:00 - 08:00
EP1082	<b>Proportion of relapsing MS patients with low vs high annualised whole brain volume atrophy rates after 5?6 years of ozanimod and relationship to cognitive processing speed</b>	08:00 - 08:00
EP1083	<b>Two years of high-efficacy therapy reduces disease activity and brain volume loss in Japanese patients with relapse-onset multiple sclerosis</b>	08:00 - 08:00
EP1084	<b>Effects of ocrelizumab on disability progression and inflammatory activity in multiple sclerosis patients during the two-year follow-up</b>	08:00 - 08:00
EP1085	<b>Real world experience with cladribine treatment in Slovakia</b>	08:00 - 08:00
EP1086	<b>Assessment of treatment satisfaction across oral DMTs for multiple sclerosis: a preliminary baseline analysis from the STATURE study</b>	08:00 - 08:00
EP1087	<b>Quantitation of bivalent and monovalent natalizumab: providing a tool to study effects of IgG4 arm exchange</b>	08:00 - 08:00
EP1088	<b>Efficacy and safety profiles of cladribine in highly active multiple sclerosis: a tertiary MS center experience in Turkey</b>	08:00 - 08:00
EP1089	<b>DISCOntinuation of disease-modifying therapies in MS (DISCOMS) extension – study design and baseline demographics to date</b>	08:00 - 08:00
EP1090	<b>SARS-CoV-2 specific T cell immunity in spike protein antibody negative MS patients after vaccination</b>	08:00 - 08:00
EP1091	<b>Humoral and T-cell response to SARS-CoV-2 mRNA vaccine in multiple sclerosis patients treated with disease modifying therapies</b>	08:00 - 08:00
EP1092	<b>Infections in patients with multiple sclerosis treating with disease-modifying therapies: a risk assessment cohort study</b>	08:00 - 08:00
EP1093	<b>Safety assessment of a natalizumab home administration procedure: results from a real-life cohort at the Lille university hospital</b>	08:00 - 08:00
EP1094	<b>Longitudinal humoral immune response against COVID-19 adenovirus-based vaccines in patients with multiple sclerosis from Argentina undergoing immunosuppressive treatment</b>	08:00 - 08:00
EP1095	<b>Tixagevimab and cilgavimab (Evusheld) boosts antibody levels to SARS-CoV-2 in patients with multiple sclerosis on b-cell depleters</b>	08:00 - 08:00

EP1096	<b>Exploring the reasons behind Ocrelizumab infusions delay during the first wave of COVID-19 pandemic in Italy: results of a survey among MS centers</b>	08:00 - 08:00
EP1097	<b>Longitudinal post-vaccine SARS-CoV-2 IgG titers, memory B cell responses and risk of COVID-19 in multiple sclerosis over 1 year</b>	08:00 - 08:00
EP1098	<b>Short and long-term serology response of MS patients treated with natalizumab following two doses of mRNA COVID-19 vaccine (Pfizer)</b>	08:00 - 08:00
EP1099	<b>The prevalence and associated factors of infusion-related reactions of the first full dose (600 mg) ocrelizumab instead of two doses apart</b>	08:00 - 08:00
EP1100	<b>COVID-19 vaccination patterns and outcomes among persons with multiple sclerosis in the FlywheelMS cohort</b>	08:00 - 08:00
EP1101	<b>Neutropenia associated with rituximab and ocrelizumab treatment in multiple sclerosis: a retrospective case series and a systematic review of reported cases</b>	08:00 - 08:00
EP1102	<b>Ocrelizumab treated patients who developed Coronavirus disease-19 despite being vaccinated</b>	08:00 - 08:00
EP1103	<b>A retrospective study on B-cell depleting therapies in multiple sclerosis patients: frequency of the wearing off phenomenon</b>	08:00 - 08:00
EP1104	<b>Risk of COVID-19 after vaccination among people with multiple sclerosis who are treated with disease modifying therapies</b>	08:00 - 08:00
EP1105	<b>Earlier ofatumumab treatment May reduce disease progression and relapses for patients with relapsing-remitting multiple sclerosis: results from a cost-consequence model</b>	08:00 - 08:00
EP1106	<b>A retrospective evaluation of seroconversion after COVID-19 during the early Omicron wave in fully vaccinated MS patients receiving B-cell depletion therapies</b>	08:00 - 08:00
EP1107	<b>Tick-borne bacterium <i>Neoehrlichia mikurensis</i> - an emerging safety concern during CD20-depleting therapy? – A case report</b>	08:00 - 08:00
EP1108	<b>Efficacy of natalizumab in MS patients with a 12-week dosing gap</b>	08:00 - 08:00
EP1109	<b>Evaluating the efficacy and safety of transitioning patients from natalizumab to ocrelizumab</b>	08:00 - 08:00
EP1110	<b>Assessing the benefits of disease modifying therapy in relapsing multiple sclerosis using the MAGNIMS score: a post-hoc analysis of OPTIMUM study of ponesimod by early relapse status</b>	08:00 - 08:00
EP1111	<b>Increased use of anti-CD20 monoclonal antibodies (anti-CD20s) in early line treatments for relapsing remitting multiple sclerosis</b>	08:00 - 08:00

	<b>(RRMS) patients in Europe and the United States</b>	
EP1112	<b>The association of MAGNIMS score with long-term disability progression in RMS</b>	08:00 - 08:00
EP1113	<b>Immune response to SARS-CoV-2 vaccines in patients with multiple sclerosis in Argentina: prospective and multicenter study</b>	08:00 - 08:00
EP1114	<b>Relapse-free time in relapsing-remitting multiple sclerosis: a new health indicator</b>	08:00 - 08:00
EP1115	<b>Cladribine treatment exerts specific effects on memory B cell immunoglobulin repertoires in multiple sclerosis patients</b>	08:00 - 08:00
EP1116	<b>Post hoc analysis of cognitive processing speed at time of first confirmed relapse in patients with relapsing multiple sclerosis treated with ozanimod vs interferon <math>\gamma</math>-1A in the phase 3 SUNBEAM trial?</b>	08:00 - 08:00
EP1117	<b>Effect of ocrelizumab treatment on retinal atrophy: a single-center prospective observational study</b>	08:00 - 08:00
EP1118	<b>High-dimensional immune profiling of peripheral blood identifies a biomarker to monitor dimethyl fumarate response in multiple sclerosis</b>	08:00 - 08:00
EP1119	<b>Can we compare data from different fatigue PROs in MS? Mapping the fatigue symptoms and impacts questionnaire - relapsing multiple sclerosis (FSIQ-RMS) Symptoms domain and the modified fatigue impact scale (mFIS)</b>	08:00 - 08:00
EP1120	<b>Elevated acetate levels correlate with optimal response to ocrelizumab treatment in low inflammatory primary progressive MS patients</b>	08:00 - 08:00
EP1121	<b>Effect of disease modifying therapy on T2-flair-based neurodegenerative MRI outcomes: a longitudinal, real-world, US-based, multi-center multiple sclerosis study</b>	08:00 - 08:00
EP1122	<b>Development of an active biosensing digital application (App) for monitoring fingers' functions</b>	08:00 - 08:00
EP1123	<b>Long-term dosage and persistence of nabiximols in a randomized clinical trial and real-world registry</b>	08:00 - 08:00
EP1124	<b>Evaluation of fampridine treatment response by triple stimulation technique</b>	08:00 - 08:00
EP1125	<b>Intermittent negative pressure applied to the lower limb of patients with multiple sclerosis and its impact on symptoms</b>	08:00 - 08:00
EP1126	<b>Real-world outcomes of teriflunomide in relapsing-remitting multiple sclerosis: a prospective cohort study</b>	08:00 - 08:00
EP1127	<b>Real-world clinical and economic outcomes among persons</b>	08:00 - 08:00

	<b>with multiple sclerosis initiating first- vs second-line treatment with ocrelizumab</b>	
EP1128	<b>Cladribine treatment in turkish MS patients</b>	08:00 - 08:00
EP1129	<b>Experience with cladribine in a real world MS cohort</b>	08:00 - 08:00
EP1130	<b>Assessment of persistence to disease modifying treatments in patients with multiple sclerosis</b>	08:00 - 08:00
EP1131	<b>A real-world single-centre analysis of the safety and efficacy of cladribine tablets for relapsing multiple sclerosis</b>	08:00 - 08:00
EP1132	<b>A real-world study of four-year follow up study of patients treated with oral cladribine from 2018-2022</b>	08:00 - 08:00
EP1133	<b>Effect of treating hospital on discontinuation rates of dimethyl fumarate in multiple sclerosis</b>	08:00 - 08:00
EP1134	<b>Real life efficacy and tolerability of cladribine: multicentre study in galicia (CLADRIGAL)</b>	08:00 - 08:00
EP1135	<b>Effectiveness of cladribine tablets in the treatment of active relapsing-remitting multiple sclerosis: a multicenter, observational study</b>	08:00 - 08:00
EP1136	<b>Is there an impact on early initiation of DMTs in patients with RRMS in the German registry?</b>	08:00 - 08:00
EP1137	<b>Novel real world evidence from mSGo, a digital support program for secondary Progressive multiple sclerosis patients in Australia using siponimod</b>	08:00 - 08:00
EP1138	<b>Health experiences of the multiple sclerosis community during the second year of the COVID-19 pandemic, plans for future crises</b>	08:00 - 08:00
EP1139	<b>Body-mind therapy intervention improves quality of life in people with relapsing-remitting multiple sclerosis. A pivotal study</b>	08:00 - 08:00
EP1140	<b>Staggered steps: determining the impact of multiple sclerosis (MS) On lower limb health through scoping review and public and patient involvement</b>	08:00 - 08:00
EP1141	<b>Balance rehabilitation in people with multiple sclerosis: robotic versus usual care intervention protocols</b>	08:00 - 08:00
EP1142	<b>Energy expenditure, energy cost and relative aerobic load of walking in people with multiple sclerosis</b>	08:00 - 08:00
EP1143	<b>Exploring the feasibility of using virtual reality for cognitive assessment in multiple sclerosis</b>	08:00 - 08:00
EP1144	<b>Can demographic and clinical variables influence fatigue in people with multiple sclerosis? A cross-sectional study</b>	08:00 - 08:00

EP1145	<b>Treatment satisfaction with siponimod in patients with advancing relapsing multiple sclerosis: Interim results of the EXCHANGE study</b>	08:00 - 08:00
EP1146	<b>Disability status and cognitive functioning in patients with advancing multiple sclerosis switching to siponimod: interim results of the exchange study</b>	08:00 - 08:00
EP1147	<b>Accelerated Long-term forgetting in multiple sclerosis-patients: application of a neuropsychological test to detect everyday memory deficits in early-stage multiple sclerosis</b>	08:00 - 08:00
EP1148	<b>Processing speed during pregnancy in multiple sclerosis: a prospective cohort study</b>	08:00 - 08:00
EP1149	<b>Association between the EDSS and MS duration with cognitive impairment in a large Argentinian cohort of patient with multiple sclerosis</b>	08:00 - 08:00
EP1150	<b>Cognitive impairment in early multiple sclerosis</b>	08:00 - 08:00
EP1151	<b>Determination of the factors affecting coping style with multiple sclerosis</b>	08:00 - 08:00
EP1152	<b>French validation of the work difficulties questionnaire in multiple sclerosis: preliminary data focus on anxiety</b>	08:00 - 08:00
EP1153	<b>The effects of cognitive reserve and biological sex on cognitive changes in people with multiple sclerosis: evidence from an exploratory and longitudinal study</b>	08:00 - 08:00
EP1154	<b>Objective and subjective measures of executive functions in multiple sclerosis: implications for daily life functioning</b>	08:00 - 08:00
EP1155	<b>Self-efficacy influences depression and anxiety in a cross-sectional cohort of people with multiple sclerosis</b>	08:00 - 08:00
EP1156	<b>The effect of fampridine on cognition in patients with multiple sclerosis (MS): a systematic review and meta-analysis</b>	08:00 - 08:00
EP1157	<b>Demographic and clinical characteristics of persons with multiple sclerosis with psychiatric disorders</b>	08:00 - 08:00
EP1158	<b>Emotional expressions and evaluation of quality of life in patients with multiple sclerosis and their relatives</b>	08:00 - 08:00
EP1159	<b>Moving beyond the number of correct responses as an outcome measure in symbol-digit substitution testing using Konectom™ smartphone-based cognitive processing speed test</b>	08:00 - 08:00
EP1160	<b>The role of personality traits on clinical and neuropsychological variables of people with MS in Argentina</b>	08:00 - 08:00
EP1161	<b>Measuring the impact of common exercise programs on subjective fatigue and metabolic efficiency during daily living activities in people with multiple sclerosis: a randomized</b>	08:00 - 08:00

	<b>controlled pilot trial</b>	
EP1162	<b>The global inequality of neurological research: a systematic analysis of clinical trials between 2017 and 2021</b>	08:00 - 08:00
EP1163	<b>Discontinuation of high- versus middle-efficacy disease-modifying treatment in middle-aged patients with multiple sclerosis</b>	08:00 - 08:00
EP1164	<b>Adherence to treatment in multiple sclerosis. The importance of personality, executive functions, and social support</b>	08:00 - 08:00
EP1165	<b>Factors influencing patient decisions when choosing disease modifying therapy for multiple sclerosis</b>	08:00 - 08:00
EP1166	<b>Heterogeneous virtual multiple sclerosis patients for analysis of personalized treatment responses</b>	08:00 - 08:00
EP1167	<b>Did the introduction of the Sars-Cov-2 vaccine influence the choices of therapy in patients with a new diagnosis of multiple sclerosis?</b>	08:00 - 08:00
EP1168	<b>Intravenous transplantation of bone marrow-derived mesenchymal stromal cells in patients with multiple sclerosis, a phase I/II, double-blinded, randomized, controlled, crossed over clinical trial</b>	08:00 - 08:00
EP1169	<b>Physical activity level in people with multiple sclerosis in the Czech Republic</b>	08:00 - 08:00
EP1170	<b>Sit to stand tests can be an interesting tool for disability and ability to ambulate in pwMS</b>	08:00 - 08:00
EP1171	<b>Activity and efficacy of radial shock wave therapy in reducing spasticity in people with multiple sclerosis</b>	08:00 - 08:00
EP1172	<b>Music moves – co-creating a music-supported exercise programme with and for people with multiple sclerosis</b>	08:00 - 08:00
EP1173	<b>Multiple sclerosis patients perform tandem gait with additional upper-limbs movements: proposal of an inefficiency index</b>	08:00 - 08:00
EP1174	<b>Effect of the synchronized telerehabilitation-based upper extremity training program on hand-arm functions in people with multiple sclerosis: a pilot study</b>	08:00 - 08:00
EP1175	<b>Assessment of telerehabilitation in people with multiple sclerosis: from the patient's perspective</b>	08:00 - 08:00
EP1176	<b>Individual telerehabilitation program for improving balance in people with MS</b>	08:00 - 08:00
EP1177	<b>Evaluating preliminary efficacy of a Cognitive Occupation-Based programme for people with Multiple Sclerosis (COB-MS): a feasibility cluster-randomised controlled trial</b>	08:00 - 08:00

EP1178	<b>Developing a web-based tele-neurorehabilitation system and implementation in multiple sclerosis patients</b>	08:00 - 08:00
EP1179	<b>Postural control and lower extremity isokinetic muscle strength in people with newly diagnosed multiple sclerosis with no disability</b>	08:00 - 08:00
EP1180	<b>Age-related blood transcriptional regulators affect disease progression in pediatric multiple sclerosis</b>	08:00 - 08:00
EP1181	<b>Shifting from natalizumab to alemtuzumab in pediatric-onset multiple sclerosis</b>	08:00 - 08:00
EP1182	<b>Understanding the unmet need for the treatment of patients with progressive forms of multiple sclerosis (MS) In Europe and the United States</b>	08:00 - 08:00
EP1183	<b>mTOR and the unfolded protein response conversely regulate oligodendrocyte maturation <i>in vitro</i> and are active in chronic demyelinating lesions of cuprizone</b>	08:00 - 08:00
EP1184	<b>Profiling cognitive-motor interference in cognitively impaired persons with progressive multiple sclerosis</b>	08:00 - 08:00
EP1185	<b>SPMS diagnosis: a Canadian practice audit</b>	08:00 - 08:00
EP1186	<b>Demographic and clinical characteristics of persons with severe disability: the descriptive study from Turkey</b>	08:00 - 08:00
EP1187	<b>When does progression start and do objective classifiers provide help for the clinicians in defining secondary progressive multiple sclerosis?</b>	08:00 - 08:00
EP1188	<b>Construction of a resource for advance care planning in multiple sclerosis (ConCure-SM): results of cognitive debriefing with users</b>	08:00 - 08:00
EP1189	<b>Active inflammation in primary progressive multiple sclerosis: a systematic review</b>	08:00 - 08:00
EP1190	<b>A novel, patient-centred real-world evidence study designed to better understand active and non-active progressive multiple sclerosis using health records in the United States</b>	08:00 - 08:00
EP1191	<b>Magnetic resonance imaging outcomes, neurofilament light, smoking, and treatment with erythropoietin, methylprednisolone, natalizumab or placebo in progressive multiple sclerosis</b>	08:00 - 08:00
EP1192	<b>Concentric sclerosis of baló: Description of six patients from a cohort of Rio de Janeiro and review of the literature of antemortem diagnosed cases</b>	08:00 - 08:00
EP1193	<b>Further analysis of cognitively resilient adults with MS: Assessing effects of DMT and neuroimaging indices</b>	08:00 - 08:00



EP1194	<b>Peripheral nervous system impairment in multiple sclerosis patients: ultrasound and electrodiagnostic study</b>	08:00 - 08:00
EP1195	<b>Clinical and demographic characteristics of late-onset multiple sclerosis</b>	08:00 - 08:00
EP1196	<b>Prognostic role of visual evoked potentials at multiple sclerosis diagnosis.</b>	08:00 - 08:00
EP1197	<b>The risk of parkinson's disease in multiple sclerosis and neuromyelitis optica spectrum disorder: a nationwide cohort study in South Korea</b>	08:00 - 08:00
EP1198	<b>Characterization of patient and treatment characteristics in SPMS and at risk for SPMS patients in clinical routine: final results from the pangaea 2.0 evolution study</b>	08:00 - 08:00
EP1199	<b>Cross-sectional analysis of stressful life events and relapse, disability, depression-risk, and fatigue in people with MS</b>	08:00 - 08:00
EP1200	<b>Neighborhood level social determinants of health and their association with ambulatory and cognitive disability in multiple sclerosis</b>	08:00 - 08:00
EP1201	<b>Incidence of COVID-19 after vaccination in people with multiple sclerosis in Argentina: data from the nationwide registry RelevaEM</b>	08:00 - 08:00
EP1202	<b>COVID-19 and the risk of CNS demyelinating diseases: a systematic review</b>	08:00 - 08:00
EP1203	<b>Socioeconomic status of Iranian patients with multiple sclerosis in relation to disease-induced disability</b>	08:00 - 08:00
EP1204	<b>Life and death in multiple sclerosis: 20 years-later reappraisal of a cohort of patients residing in Verona, Italy</b>	08:00 - 08:00
EP1205	<b>Rising prevalence of multiple sclerosis in Tunisia</b>	08:00 - 08:00
EP1206	<b>Cognitive and motor impairment in multiple sclerosis and their relative impact on employment status: Preliminary findings from the north american registry for care and research in multiple sclerosis (NARCRMS)</b>	08:00 - 08:00
EP1207	<b>Significant negative associations of stressful life events with mental quality of life in an international sample of people with MS</b>	08:00 - 08:00
EP1208	<b>Prevalence and factors associated with COVID-19 vaccination in people with multiple sclerosis compared to the general population in Croatia</b>	08:00 - 08:00
EP1209	<b>Russian multiple sclerosis e-registry: preliminary results of a four-year study</b>	08:00 - 08:00
EP1210	<b>Multiple sclerosis in the campania region (South Italy)</b>	08:00 - 08:00

	<b>2015-2020: incidence algorithm validation</b>	
EP1211	<b>impact of the COVID-19 pandemic on personal networks and neurological outcomes of people with multiple sclerosis: a case-control cross-sectional and longitudinal analysis</b>	08:00 - 08:00
EP1212	<b>Anti-SARS-CoV-2 vaccination immune response in MS patients: interim results of a multicentre, prospective cohort study</b>	08:00 - 08:00
EP1213	<b>Multiple sclerosis incidence in Latin America and the Caribbean (EMELAC Project) - Uruguayan results</b>	08:00 - 08:00
EP1214	<b>Comorbidities and multiple sclerosis: prevalence and relationship to disease characteristics in a cohort of 1023 patients with multiple sclerosis</b>	08:00 - 08:00
EP1215	<b>Menstrual cycle, MS symptom fluctuations, and impact of hormonal contraceptives: a pilot study</b>	08:00 - 08:00
EP1216	<b>Free testosterone levels in untreated men with multiple sclerosis are not associated with relapses or disability status</b>	08:00 - 08:00
EP1217	<b>Incongruence between objective measure of cardiorespiratory fitness and subjective reports of physical activity especially in men with multiple sclerosis</b>	08:00 - 08:00
EP1218	<b>Sexual dysfunction in premenopausal Spanish women with relapsing multiple sclerosis: a multicenter study.</b>	08:00 - 08:00
EP1219	<b>A pilot study on sex hormones and cognition in men with MS</b>	08:00 - 08:00
P472	<b>The effect of sex and race on delays in multiple sclerosis evaluation and diagnosis: final analysis from a prospective cross-sectional study</b>	08:00 - 08:00
P786	<b>Use of COVID-19 prevention therapy Evusheld in patients with multiple sclerosis: a retrospective observational study</b>	08:00 - 08:00
EP1264	<b>Prevalence and clinical features of myelin oligodendrocyte glycoprotein (MOG) antibodies in adult patients with a clinically isolated syndrome</b>	08:00 - 08:00
EP1265	<b>Temporal dynamics of spatial distributional features of brain white matter lesions and concurrent clinical changes in relapsing MS</b> <i>Poster Presenter: Carmen Tur, ES</i>	08:00 - 08:00
EP1266	<b>Breakthrough COVID after primary or booster vaccination in MS patients under disease modifying treatment</b>	08:00 - 08:00
EP1267	<b>Intrathecal antibody-secreting cells in multiple sclerosis display distinct phenotypes with low expression of MS4A1 (CD20)</b>	08:00 - 08:00
EP1268	<b>Exposure to high geomagnetic disturbances and low ambient ultraviolet radiation are associated with an earlier age of multiple sclerosis onset in low latitude areas</b>	08:00 - 08:00

EP1269	<b>Surrogates for SARS-CoV-2 vaccination response in multiple sclerosis identified in a real world scenario</b>	08:00 - 08:00
EP1270	<b>Durability of Immune Response to COVID-19 Vaccines in MS Patients on B-Cell Depleting Therapy</b>	08:00 - 08:00
EP1271	<b>Real-World Outcomes Among Persons with Multiple Sclerosis Treated with Monoclonal Antibodies or Antivirals for Mild-to-Moderate COVID-19</b>	08:00 - 08:00
EP1220	<b>JCV index and lymphocytes kinetics in MS patients under EID vs SIT natalizumab treatment</b>	08:00 - 08:00
EP1221	<b>Safety of ocrelizumab in multiple sclerosis: Long-term adverse event analyses based on initial exposure quartiles</b>	08:00 - 08:00
EP1222	<b>MultiSCRIPT: A prospective, randomized pragmatic platform trial embedded within the Swiss MS Cohort to assess the value of intensive neurofilament light chain monitoring added to current usual care to inform personalized treatment decisions</b>	08:00 - 08:00
EP1223	<b>Lower drug levels in proportion of patients with relapsing-remitting multiple sclerosis on subcutaneous natalizumab</b>	08:00 - 08:00
EP1224	<b>Assessing the use of the machine learning algorithm MIMoSA for lesion segmentation in a diverse cohort of multiple sclerosis phenotypes</b>	08:00 - 08:00
EP1225	<b>The interface of frailty, depression, vascular disease, and mortality in over 12,000 people with Multiple Sclerosis in England: a population-based retrospective cohort study</b>	08:00 - 08:00
EP1226	<b>Walking fatigability manifests globally in several gait domains in people with multiple sclerosis during a prolonged walking</b>	08:00 - 08:00
EP1227	<b>Modulation of P2X7 receptor activity in experimental autoimmune encephalomyelitis models</b>	08:00 - 08:00
EP1228	<b>Single cell RNA sequencing of RRMS CSF identifies changes in cell type proportions across different natalizumab treatment intervals</b>	08:00 - 08:00
EP1229	<b>Impact of balance &amp; gait training in a cohort of patients with multiple sclerosis (PwMS) along 13 years</b>	08:00 - 08:00
EP1230	<b>A single centre analysis of infection and immune parameters in patients undergoing treatment with Ocrelizumab for Multiple Sclerosis at the Queen Elizabeth Hospital in Birmingham (UK)</b>	08:00 - 08:00
EP1231	<b>Comparison of Strategies to Address Hypogammaglobulinemia Secondary to B-cell Depleting Therapies in Neuroimmunology Patients</b>	08:00 - 08:00
EP1232	<b>Relapse associated worsening in a real-life Multiple Sclerosis cohort: the role of age and pyramidal phenotype</b>	08:00 - 08:00

EP1233	<b>The global Patient Reported Outcomes for Multiple Sclerosis Initiative: is the experience of patients with Multiple Sclerosis used to influence health policies and decisions made in health systems?</b>	08:00 - 08:00
EP1234	<b>Patient-reported outcomes in multiple sclerosis clinical trials: Measurement lessons from the EXPAND study</b>	08:00 - 08:00
EP1235	<b>ACAPELLA: Hypogammaglobulinemia and JCV status in Ocrelizumab-Treated Patients, Late Breaking Data</b>	08:00 - 08:00
EP1236	<b>Serum Neurofilament Light Chain Levels Show Marked Reduction in Patients Treated With Ponesimod: Exploratory Analysis from the OPTIMUM Study</b>	08:00 - 08:00
EP1237	<b>UBE3A inhibits remyelination by targeting ABCA1 for degradation</b>	08:00 - 08:00
EP1238	<b>COVID-19 in people with multiple sclerosis treated with ocrelizumab: Clinical outcomes in vaccinated patients</b>	08:00 - 08:00
EP1239	<b>COVID-19 immunity in Multiple Sclerosis: Living with MS on DMTs a year after COVID-19 vaccination</b>	08:00 - 08:00
EP1240	<b>Patients with progression independent of relapse activity show increased degeneration of major white matter tracts</b>	08:00 - 08:00
EP1241	<b>Using geometric mean T<sub>2</sub> to better define diffusely abnormal white matter in multiple sclerosis</b>	08:00 - 08:00
EP1242	<b>Long-term disability improvement during EBV-targeted T-cell immunotherapy ATA188 is related to brain volume change and normalised magnetisation transfer ratio in T2 lesions</b>	08:00 - 08:00
EP1243	<b>Treatment satisfaction is associated with various PROMs in patients with relapsing-remitting multiple sclerosis</b>	08:00 - 08:00
EP1244	<b>sNFL applicability as additional monitoring tool in Natalizumab Extended Interval Dosing regimen for RRMS patients</b>	08:00 - 08:00
EP1245	<b>Anti-EBNA1 molecular mimicry probably initiates cross-reacting autoantibodies in multiple sclerosis (MS) &amp; systemic lupus erythematosus (SLE)</b>	08:00 - 08:00
EP1246	<b>Ocrelizumab extended dosing in Primary Progressive Multiple Sclerosis during the COVID-19 pandemic: a multicenter experience</b>	08:00 - 08:00
EP1247	<b>Factors related to restless leg syndrome in neuromyelitis optica spectrum disorder</b>	08:00 - 08:00
EP1248	<b>CXCL13 index as a predictive activity biomarker in clinically isolated syndrome: 5 year followup</b>	08:00 - 08:00
EP1249	<b>Sera of Neuromyelitis Optica Patients Increase BID-Mediated Apoptosis in Astrocytes</b>	08:00 - 08:00

EP1250	<b>?Effectiveness of Ocrelizumab on Clinical and MRI Outcome Measures across Caucasian and African American Cohorts: A Single-Center Retrospective Study</b>	08:00 - 08:00
EP1251	<b>The lived experience of the COVID-19 pandemic for a large cohort of Australians with differing multiple sclerosis-related disability severities: evidence from the Australian MS longitudinal study (AMSLS).</b>	08:00 - 08:00
EP1252	<b>Long-read sequencing of germline immunoglobulin heavy-chain locus in multiple sclerosis patients</b>	08:00 - 08:00
EP1253	<b>Profile of serum biomarkers in seronegative NMOSD</b>	08:00 - 08:00
EP1254	<b>Natalizumab administration in Relapsing Remitting Multiple Sclerosis: the EASIER study</b>	08:00 - 08:00
EP1255	<b>Sensitive detection of balance impairment in early multiple sclerosis</b>	08:00 - 08:00
EP1256	<b>Cholesterol in macrophage-derived extracellular vesicles drives remyelination in the brain</b>	08:00 - 08:00
EP1257	<b>Relationships between employment status and patient-reported outcome and objective cognitive measures in patients with relapsing-remitting multiple sclerosis</b>	08:00 - 08:00
EP1258	<b>Neuromuscular electrical stimulation reduces spinal excitability in spastic Multiple Sclerosis patients</b>	08:00 - 08:00
EP1259	<b>TOP20 Body Functions, Activities and Participation Categories Affecting Work Capacity Level of Multiple Sclerosis Patients: WHO Comprehensive ICF Core Set for Multiple Sclerosis Results</b>	08:00 - 08:00
EP1260	<b>Patient-reported outcome measures do not predict cognitive impairment in relapsing MS patients</b>	08:00 - 08:00
EP1261	<b>Treatment schedule matters on the efficacy of transcranial magnetic stimulation in an intensive neurorehabilitation setting in progressive MS</b>	08:00 - 08:00
EP1262	<b>Test-retest reliability of spatial-temporal gait parameters (minute-by-minute) in people with multiple sclerosis during the 6MWT</b> <i>Speaker: Peter Feys, BE</i>	08:00 - 08:00
EP1263	<b>Ocrelizumab reduces focal lesions and global/regional volume changes if compared to other second-line treatment.</b>	08:00 - 08:00

*Educational Sessions*

08:45 - 09:45

Room 2

**Educational Session 1: Treatment of relapsing-remitting MS***Chair:* Emmanuelle Waubant, US*Chair:* Christine Lebrun-Frenay, FR**Introduction by chairs**

08:45 - 08:50

**How to treat MS patients with concomitant other autoimmune diseases?**

08:50 - 09:05

*Speaker:* Thomas Daikeler, CH**How to define treatment failure?**

09:05 - 09:20

*Speaker:* Emmanuelle Waubant, US**Should RIS patients be treated?**

09:20 - 09:35

*Speaker:* Christine Lebrun-Frenay, FR**Discussion**

09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 3

**Educational Session 2: Infections and Vaccinations in MS***Chair:* Sandra Vukusic, FR*Chair:* Bernhard Hemmer, DE**Introduction by chairs**

08:45 - 08:50

**Infections as trigger, prodrome or consequence of MS**

08:50 - 09:05

*Speaker:* Chiara Zecca, CH**Is there a risk for MS patients to get vaccinated?**

09:05 - 09:20

*Speaker:* Bernhard Hemmer, DE**Who should be vaccinated with what and when?**

09:20 - 09:35

*Speaker:* Sandra Vukusic, FR**Discussion**

09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 4

**Educational Session 6 (MAGNIMS): MRI and the diagnosis of MS - where we are and what the future is***Chair:* Jaume Sastre-Garriga, ES*Chair:* Olga Ciccarelli, GB**Introduction by chairs**

08:45 - 08:50

**The 2017 McDonald criteria: a critical reappraisal**

08:50 - 09:05

*Speaker:* Jaume Sastre-Garriga, ES

O002

**Future MRI measures (optic nerve MRI, central vein sign, cortical lesions, leptomeningeal enhancement)**

09:05 - 09:20

*Speaker:* Olga Ciccarelli, GB

<b>MS mimics: red and green flags</b>	09:20 - 09:35
<i>Speaker:</i> Frederik Barkhof, NL	
<b>Discussion</b>	09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 5

**Educational Session 4 (RIMS): Updates in MS rehabilitation - cognitive and physical functioning and fatigue management***Chair:* Anders Guldhammer Skjerbaek, DK*Chair:* Roshan das Nair, NO

<b>Introduction by chairs</b>	08:45 - 08:50
<b>Cognitive rehabilitation</b>	08:50 - 09:05
<i>Speaker:</i> Roshan das Nair, NO	
<b>Optimizing physical functioning</b>	09:05 - 09:20
<i>Speaker:</i> Anders Guldhammer Skjerbaek, DK	
<b>Fatigue management in rehabilitation</b>	09:20 - 09:35
<i>Speaker:</i> Daphne Kos, BE	
<b>Discussion</b>	09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 6

**Educational Session 5: Pathology of MS***Chair:* Inge Huitinga, NL*Chair:* Hans Lassmann, AT

	<b>Introduction by chairs</b>	08:45 - 08:50
	<b>Inflammatory reaction within the CNS of multiple sclerosis patients: mechanisms and potential triggers</b>	08:50 - 09:05
	<i>Speaker:</i> Inge Huitinga, NL	
	<b>Tracking the origin of neurodegeneration</b>	09:05 - 09:20
	<i>Speaker:</i> Doron Merkler, CH	
O001	<b>Pathology of Multiple Sclerosis and MOG antibody associated disease: similarities and differences</b>	09:20 - 09:35
	<i>Speaker:</i> Hans Lassmann, AT	
	<b>Discussion</b>	09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 7

**Educational Session 3: Early stages of MS***Chair:* Ruth Ann Marrie, CA*Chair:* Darin Okuda, US

<b>Introduction by chairs</b>	08:45 - 08:50
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<b>When the disease starts? MS Prodrome</b>	08:50 - 09:05
<i>Speaker:</i> Ruth Ann Marrie, CA	
<b>The radiological isolated syndrome (RIS), is it already MS?</b>	09:05 - 09:20
<i>Speaker:</i> Darin Okuda, US	
<b>How paediatric MS could shed light on early MS?</b>	09:20 - 09:35
<i>Speaker:</i> Yael Hachohen, GB	
<b>Discussion</b>	09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 8

**Educational Session 7: Life style and environmental factors***Chair:* Ellen Mowry, US*Chair:* Tomas Olsson, SE

	<b>Introduction by chairs</b>	08:45 - 08:50
O003	<b>Interactions between genetic, lifestyle/environmental risk factors for multiple sclerosis</b>	08:50 - 09:05
	<i>Speaker:</i> Tomas Olsson, SE	
O004	<b>Dietary inflammation index and MS—action needed?</b>	09:05 - 09:20
	<i>Speaker:</i> Ellen Mowry, US	
	<b>Role of gut microbiota and susceptibility of MS</b>	09:20 - 09:35
	<i>Speaker:</i> Anne-Katrin Pröbstel, CH	
	<b>Discussion</b>	09:35 - 09:45

*Clinical*

10:00 - 11:00

Room 1

**European Charcot Foundation Symposium: The patient at the centre: role of patient reported outcomes***Chair:* Maria Pia Amato, IT*Chair:* Giancarlo Comi, IT

	<b>Introduction</b>	10:00 - 10:05
	<i>Speaker:</i> Helga Weiland, ZA	
	<b>The agenda of the global patient reported outcomes for multiple sclerosis (PROMS) initiative: progresses and open questions</b>	10:05 - 10:20
	<i>Speaker:</i> Paola Zaratin, IT	
O005	<b>E-Health to capture “patient voice”</b>	10:20 - 10:35
	<i>Speaker:</i> Letizia Leocani, IT	
	<b>Is time to consider PROs in decision processes for health care systems?</b>	10:35 - 10:50
	<i>Speaker:</i> Usman Khan, US	
	<b>Discussion</b>	10:50 - 11:00



*Therapy*

10:00 - 11:00

Room 2

**Hot Topic 1: High efficacy therapies***Chair:* Patricia Coyle, US*Chair:* Jop Mostert, NL

	<b>Introduction by chairs</b>	10:00 - 10:05
	<b>Early predictors of treatment outcome</b>	10:05 - 10:15
	<i>Speaker:</i> Xavier Montalban, ES	
O006	<b>How to make a timely switch to high efficacy DMT</b>	10:15 - 10:25
	<i>Speaker:</i> Dalia L. Rotstein, CA	
O007	<b>Flipping the pyramid and beyond</b>	10:25 - 10:35
	<i>Speaker:</i> Gavin Giovannoni, GB	
	<b>Discussion</b>	10:35 - 11:00

*Clinical*

10:00 - 11:00

Room 3

**Hot Topic 2: NMO-SD***Chair:* Kazuo Fujihara, JP*Chair:* Sandra Vukusic, FR

	<b>Introduction by chairs</b>	10:00 - 10:05
	<b>Aligning 'new' and 'old' treatments for NMO-SD</b>	10:05 - 10:15
	<i>Speaker:</i> Jacqueline Palace, GB	
O008	<b>The immunology of NMO-SD and MOG-AD</b>	10:15 - 10:25
	<i>Speaker:</i> Marvin van Luijn, NL	
	<b>Stopping or de-escalating immune suppressive treatments in NMO-SD and MOG-AD</b>	10:25 - 10:35
	<i>Speaker:</i> Romain Marignier, FR	
	<b>Discussion</b>	10:35 - 11:00

*Imaging and non-imaging biomarkers*

10:00 - 11:00

Room 4

**Hot Topic 3: Novel body fluid biomarkers***Chair:* Claire Bridel, CH*Chair:* Tanuja Chitnis, US

	<b>Introduction by chairs</b>	10:00 - 10:05
	<b>Emerging CSF biomarkers</b>	10:05 - 10:15
	<i>Speaker:</i> Bibiana Bielekova, US	
	<b>Emerging blood biomarkers</b>	10:15 - 10:25
	<i>Speaker:</i> Charlotte Teunissen, NL	
O009	<b>Novel fluid biomarkers for progressive MS</b>	10:25 - 10:35
	<i>Speaker:</i> Nicolás Fissolo, ES	

	<b>Discussion</b>	10:35 - 11:00
<i>Pathogenesis</i> 10:00 - 11:00		
		Room 5
	<b>Hot Topic 4: New ways of imaging MS pathology</b>	
	<i>Chair:</i> Inge Huitinga, NL	
	<i>Chair:</i> Patrick Vermersch, FR	
	<b>Introduction by chairs</b>	10:00 - 10:05
O010	<b>Spatial gene expression profiling predicts multiple sclerosis lesion evolution</b> <i>Speaker:</i> Bart Eggen, NL	10:05 - 10:15
O011	<b>Multiplex imaging of MS lesions</b> <i>Speaker:</i> Valeria Ramaglia, CA	10:15 - 10:25
	<b>Microglia-astrocyte communication in CNS inflammation</b> <i>Speaker:</i> Francisco Quintana, US	10:25 - 10:35
	<b>Discussion</b>	10:35 - 11:00
<i>Pathogenesis</i> 10:00 - 11:00		
		Room 6
	<b>Free Communications 1: Neurobiology of MS</b>	
	<i>Chair:</i> Marcin Mycko, PL	
	<i>Chair:</i> Luisa María Villar, ES	
	<b>Introduction by chairs</b>	10:00 - 10:05
O012	<b>In vivo imaging of excitatory synapse structural dynamics reveals instability in experimental autoimmune encephalomyelitis</b> <i>Speaker:</i> Rebecca Gillani, US	10:05 - 10:12
O013	<b>Spatio-temporal trajectories of cell type-specific optic nerve pathology in multiple sclerosis</b> <i>Speaker:</i> Sophia Schwarz, DE	10:12 - 10:19
O014	<b>Serum biomarkers of progression by proteomic search in extreme MS phenotypes</b> <i>Speaker:</i> Johanna Oechtering, CH	10:19 - 10:26
O015	<b>Evaluation of the protective properties of sodium channel blockers and monoamine oxidase B inhibitors in preclinical models of retinal neurodegeneration</b> <i>Speaker:</i> Michael Dietrich, DE	10:26 - 10:33
O016	<b>EBV-specific CD8 lytic response is associated with brain atrophy in MS independent of age</b> <i>Speaker:</i> Christopher Hemond, US	10:33 - 10:40
	<b>Discussion</b>	10:40 - 11:00

*Educational Sessions*

10:00 - 11:00

Room 7

**Educational Session 8 (MAGNIMS): MRI and the prognosis of MS - where we are and what the future is***Chair:* Maria Assunta Rocca, IT*Chair:* Claudio Gasperini, IT

<b>Introduction by chairs</b>	10:00 - 10:05
<b>The use of MRI in assessing prognosis – What are the clinician's needs?</b>	10:05 - 10:20
<i>Speaker:</i> Claudio Gasperini, IT	
<b>Conventional MRI in MS prognosis.</b>	10:20 - 10:35
<i>Speaker:</i> Nicola De Stefano, IT	
<b>Non-conventional MRI in MS prognosis</b>	10:35 - 10:50
<i>Speaker:</i> Maria Assunta Rocca, IT	
<b>Discussion</b>	10:50 - 11:00

*Nurses Sessions*

10:00 - 11:00

Room 8

**Nurses' Session 1: MS treatment and research: the evolving role of the nurse***Chair:* Miguel Angel Robles, ES*Chair:* Dominika Czarnota-Sz?kowska, PL

<b>Introduction by chairs</b>	10:00 - 10:05
<b>Future perspectives of MS nursing from a neurologist view</b>	10:05 - 10:20
<i>Speaker:</i> Jörg Kraus, AT	
<b>MS treatment and the evolving role of the nurse</b>	10:20 - 10:35
<i>Speaker:</i> Piet Leopold Eelen, BE	
<b>Research in MS nursing practice</b>	10:35 - 10:50
<i>Speaker:</i> Amy Perrin Ross, US	
<b>Discussion</b>	10:50 - 11:00

*Break*

11:00 - 11:30

Room 1

**Coffee Break***Plenary Sessions*

11:30 - 12:30

Room 1

**Plenary Session 1: Welcome Addresses and ECTRIMS Lecture***Chair:* Maria Pia Amato, IT*Chair:* Mar Tintoré, ES*Chair:* Bernard Uitdehaag, NL

<b>Welcome to ECTRIMS 2022</b>	11:30 - 12:00
<i>Speaker:</i> Maria Pia Amato, IT	
<i>Speaker:</i> Bernard Uitdehaag, NL	

	<b>ECTRIMS Lecture: Putting POMS in perspective</b>	12:00 - 12:30
	<i>Speaker:</i> Brenda Banwell, US	
<i>Break</i>		
12:30 - 13:15		Room 1
<b>Lunch Break</b>		
<i>Satellite Symposium</i>		
13:15 - 14:15		Room 1
<b>Satellite Symposium 1</b>		
<i>Satellite Symposium</i>		
13:15 - 14:15		Room 2
<b>Satellite Symposium 2</b>		
<i>Therapy</i>		
14:30 - 16:00		Room 1
<b>Scientific Session 1: Personalised treatment</b>		
<i>Chair:</i> Finn Sellebjerg, DK		
<i>Chair:</i> Eva Kubala Havrdová, CZ		
	<b>Introduction by chairs</b>	14:30 - 14:35
	<b>When to start which DMT in whom?</b>	14:35 - 14:50
	<i>Speaker:</i> Jaume Sastre-Garriga, ES	
O017	<b>Personalised dosing of monoclonal antibodies in multiple sclerosis</b>	14:50 - 15:05
	<i>Speaker:</i> Zoé van Kempen, NL	
	<b>Platform presentations of related original papers</b>	15:05 - 15:05
O018	<b>Comparing clinical and radiological effectiveness of disease modifying treatments in the real-world</b>	15:05 - 15:12
	<i>Speaker:</i> Marcello Moccia, GB	
O019	<b>Comparative effectiveness of autologous haematopoietic stem cell transplantation vs. fingolimod, ocrelizumab and natalizumab in relapsing-remitting MS</b>	15:12 - 15:19
	<i>Speaker:</i> Tomas Kalincik, AU	
O020	<b>Precision medicine in an unlikely future of multiple sclerosis treatment</b>	15:19 - 15:26
	<i>Speaker:</i> Jan Hillert, SE	
O021	<b>Distribution of under-represented groups enrolled in a pragmatic international multicenter trial of treatment approaches in multiple sclerosis</b>	15:26 - 15:33
	<i>Speaker:</i> Sarah Planchon, US	
	<b>Discussion</b>	15:33 - 16:00

*Imaging and non-imaging biomarkers*

14:30 - 16:00

Room 2

**Scientific Session 2: A network disease***Chair:* Aurélie Ruet, FR*Chair:* Declan Chard, GB

	<b>Introduction by chairs</b>	14:30 - 14:35
O026	<b>Network neuroscience approaches for understanding multiple sclerosis</b> <i>Speaker:</i> Lucina Qazi Uddin, US	14:35 - 14:50
	<b>The network collapse and clinical progression</b> <i>Speaker:</i> Menno M. Schoonheim, NL	14:50 - 15:05
	<b>Platform presentations of related original papers</b>	15:05 - 15:05
O027	<b>Disrupted core-periphery organization of multimodal brain networks in multiple sclerosis</b> <i>Speaker:</i> Giuseppe Pontillo, GB	15:05 - 15:12
O028	<b>Convolutional neural networks on routinely-acquired MRI to stratify MS patients according to their disability level and understand anatomical regions involved in clinical progression</b> <i>Speaker:</i> Carmen Tur, ES	15:12 - 15:19
O029	<b>Reduced network dynamics in cognitively impaired MS patients might be explained by more energetically costly state transitions</b> <i>Speaker:</i> Tommy A. A. Broeders, NL	15:19 - 15:26
O030	<b>Developing longitudinal individual-level network measures to assess treatment effects and disease burden in multiple sclerosis</b> <i>Speaker:</i> Elisa Colato, GB	15:26 - 15:33
	<b>Discussion</b>	15:33 - 16:00

*Pathogenesis*

14:30 - 16:00

Room 3

**Scientific Session 3: Remyelination***Chair:* Wia Baron, NL*Chair:* Tanja Kuhlmann, DE

	<b>Introduction by chairs</b>	14:30 - 14:35
	<b>Imaging de- and remyelination</b> <i>Speaker:</i> Cristina Granziera, CH	14:35 - 14:50
	<b>Towards promoting remyelination in clinic</b> <i>Speaker:</i> Catherine Lubetzki, FR	14:50 - 15:05
	<b>Platform presentations of related original papers</b>	15:05 - 15:05
O022	<b>Distinct properties of acellular extracellular matrix in demyelinated multiple sclerosis and toxin-induced lesions</b>	15:05 - 15:12

	<i>Speaker:</i> Jody M. de Jong, NL	
O023	<b>Reduced oligodendrocyte populations may underlie less effective remyelination in patients with late-onset multiple sclerosis</b> <i>Speaker:</i> Lidia Stork, DE	15:12 - 15:19
O024	<b>Paranodal potassium channels as neuroprotective targets in inflammatory demyelination</b> <i>Speaker:</i> Hannah Kapell, DE	15:19 - 15:26
O025	<b>Neuregulin-1 augments remyelination by enhancing microglial cholesterol efflux in chronic demyelinating lesions</b> <i>Speaker:</i> Hardeep Kataria, CA	15:26 - 15:33
	<b>Discussion</b>	15:33 - 16:00
<i>Imaging and non-imaging biomarkers</i> 14:30 - 16:00		
		Room 4
<b>Scientific Session 4: Novel modelling approaches</b>		
<i>Chair:</i> Marco Battaglini, IT		
<i>Chair:</i> Douglas L Arnold, CA		
	<b>Introduction by chairs</b>	14:30 - 14:35
O031	<b>Machine Learning: what have we learnt?</b> <i>Speaker:</i> Claudia Chien, DE	14:35 - 14:50
	<b>Clinical prediction using complex models</b> <i>Speaker:</i> Arman Eshaghi, GB	14:50 - 15:05
	<b>Platform presentations of related original papers</b>	15:05 - 15:05
O032	<b>Novel multiple sclerosis magnetic resonance imaging-derived subtypes are associated with alterations in immunological blood biomarkers in a highly active relapsing-remitting cohort</b> <i>Speaker:</i> Hajer Karoui, GB	15:05 - 15:12
O033	<b>Brain age in multiple sclerosis: a comparison between machine learning and deep learning models</b> <i>Speaker:</i> Lars Skattebol, NO	15:12 - 15:19
O034	<b>Multi-centre assessment of artificially generated MRI for cortical and juxtacortical multiple sclerosis lesion detection</b> <i>Speaker:</i> Piet M. Bouman, NL	15:19 - 15:26
O035	<b>Investigating grey matter atrophy and its relationship with white matter lesions in MS, MOGAD and AQP4-NMOSD</b> <i>Speaker:</i> Rosa Cortese, IT	15:26 - 15:33
	<b>Discussion</b>	15:33 - 16:00

*Clinical*

14:30 - 15:30

Room 5

**Free Communications 2: Pregnancy***Chair:* Barbara Kornek, AT*Chair:* Emilio Portaccio, IT**Introduction by chairs**

14:30 - 14:35

O036

**Effects of anti-CD20 therapies on infant health and physiological B-cell development if administered before or during pregnancy and/or lactation**

14:35 - 14:42

*Speaker:* Carolin Schwake, DE

O037

**Anti-CD20 monoclonal antibody therapy after 59 pregnancies in women with neurological conditions: low breastmilk transfer and normal infant development in a multicenter cohort**

14:42 - 14:49

*Speaker:* Annika Anderson, US

O038

**Pregnancy and infant outcomes in women receiving ocrelizumab for the treatment of multiple sclerosis**

14:49 - 14:56

*Speaker:* Celia Oreja-Guevara, ES

O039

**Disease activity and pregnancy outcomes after long-term exposure to natalizumab during pregnancy**

14:56 - 15:03

*Speaker:* Sandra Thiel, DE

O040

**Relapse risk after fertility treatments in women with MS: a multicenter analysis of inflammatory activity**

15:03 - 15:10

*Speaker:* Edith Graham, US**Discussion**

15:10 - 15:30

*Pathogenesis*

14:30 - 15:30

Room 6

**Young Scientific Investigators' Session 1: Immune profiling***Chair:* Franziska Di Pauli, AT*Chair:* Kjell-Morten Myhr, NO**Introduction by chairs**

14:30 - 14:35

O041

**A multi modular approach to characterize multiple sclerosis brain pathology in rapid autopsy brain tissue**

14:35 - 14:42

*Speaker:* Stephanie Zandee, CA

O042

**Metabolomic profiling of MS lesions and periplaque white matter demonstrates extensive changes in lipid metabolism**

14:42 - 14:49

*Speaker:* Dimitrios C. Ladakis, US

O043

**CSF inflammatory profile in patients with chronic active lesions is distinctive and consistent with innate and adaptive immune activation**

14:49 - 14:56

*Speaker:* Annalisa Colombi, IT

O044

**Intrathecal IgM response in MS contains brain reactive antibodies**

14:56 - 15:03

	<i>Speaker:</i> Ilaria Callegari, CH	
O045	<b>Combining anti-CD20 and inhibition of BTK sequentially – a novel induction / maintenance regimen</b>	15:03 - 15:10
	<i>Speaker:</i> Sarah Dybowski, DE	
	<b>Discussion</b>	15:10 - 15:30

*Educational Sessions*

14:30 - 15:30

Room 7

**Educational Session 9: Special situations in neuroimmunology care - pregnancy, comorbidity, elderlies***Chair:* Melinda Magyari, DK*Chair:* Zsolt Illes, DK

	<b>Introduction by chairs</b>	14:30 - 14:35
O046	<b>Pregnancy planning in MS and NMOSD: consider the differences related to child, mother and treatments</b>	14:35 - 14:50
	<i>Speaker:</i> Melinda Magyari, DK	
O047	<b>Comorbidities in neuroimmunological diseases: epidemiology and clinical (treatment-related) relevance</b>	14:50 - 15:05
	<i>Speaker:</i> Helen Tremlett, CA	
O048	<b>Multiple sclerosis and NMOSD in the elderlies</b>	15:05 - 15:20
	<i>Speaker:</i> Zsolt Illes, DK	
	<b>Discussion</b>	15:20 - 15:30

*Nurses Sessions*

14:30 - 15:30

Room 8

**Nurses' Session 2: Why we urgently need more MS Nurses – the global perspective***Chair:* Desmond Graham, AU*Chair:* Maya Zeineddine, FR

	<b>Introduction by chairs</b>	14:30 - 14:35
	<b>Using the lived experience of people with MS to enhance and extend clinical and research care</b>	14:35 - 14:50
	<i>Speaker:</i> Therese Burke, AU	
	<b>The MS nurses report</b>	14:50 - 15:05
	<i>Speaker:</i> Belinda Bardsley, AU	
	<b>The unmet need for nurses</b>	15:05 - 15:20
	<i>Speaker:</i> Joelle Massouh, AE	
	<b>Discussion</b>	15:20 - 15:30

*Break*

16:00 - 16:30

Room 1

**Coffee Break**



## Poster Session

16:30 - 18:30

Room 1

**Poster Session 1**

P001	<b>Autoimmune screening panel in patients with multiple sclerosis – a Vienna MS database study</b> <i>Speaker:</i> Katharina Riedl, AT	16:30 - 16:30
P002	<b>Are MRI findings enough to differentiate, susac syndrome from multiple sclerosis, and primary angiitis of the central nervous system?</b> <i>Speaker:</i> Mariano Marrodan, AR	16:30 - 16:30
P003	<b>Neurological Involvement in IgG4-related disease</b> <i>Speaker:</i> Doruk Arslan, TR	16:30 - 16:30
P004	<b>The impact of healthcare systems on the clinical diagnosis and disease modifying treatment usage in relapse-onset multiple sclerosis: a real-world perspective in five registries across Europe</b> <i>Speaker:</i> Richard Nicholas, GB	16:30 - 16:30
P005	<b>Change in AQP4-IgG serostatus in NMOSD: a laboratory-based analysis of 1000 patients with serial collections</b> <i>Speaker:</i> Amy Kunchok, US	16:30 - 16:30
P006	<b>Risk of relapse following COVID-19 or anty-SARS-CoV-2 vaccination in patients with neuromyelitis optica spectrum disorders</b> <i>Speaker:</i> Aleksandra Podlecka-Pi?owska, PL	16:30 - 16:30
P007	<b>Efficacy comparison of time to first adjudicated attack with inebilizumab vs satralizumab in NMOSD: a matching-adjusted indirect comparison of monotherapy registrational trials</b> <i>Speaker:</i> Friedemann Paul, DE	16:30 - 16:30
P008	<b>International, evidence-based Delphi consensus on the management of AQP4-IgG seropositive NMOSD, with a focus on treatment recommendations for eculizumab, inebilizumab and satralizumab</b> <i>Speaker:</i> Friedemann Paul, DE	16:30 - 16:30
P009	<b>Frequency of NMOSD misdiagnosis in a cohort from Latin America: impact and evaluation of different contributors</b> <i>Speaker:</i> Edgar Carnero Contentti, AR	16:30 - 16:30
P010	<b>Efficacy subgroup analyses from the phase 3 CHAMPION-NMOSD trial in adults with anti-aquaporin-4 antibody-positive neuromyelitis optica spectrum disorder</b> <i>Speaker:</i> Sean Pittock, US	16:30 - 16:30
P011	<b>Association of B cell subsets and aquaporin-4 antibody titers with disease activity in participants in the N-MOMentum trial receiving inebilizumab treatment</b> <i>Speaker:</i> Jeffrey Bennett, US	16:30 - 16:30

P012	<b>Sensitivity analysis using propensity score methods for primary efficacy outcome in the CHAMPION-NMOSD trial</b> <i>Speaker:</i> Kerstin Allen, US	16:30 - 16:30
P013	<b>Pregnancy outcomes in neuromyelitis optica spectrum disorder</b> <i>Speaker:</i> Anastasia Vishnevetsky, US	16:30 - 16:30
P014	<b>Effectiveness and safety of different therapeutic strategies of Rituximab in NMOSD patients: multicenter cohort study in Latin America</b> <i>Speaker:</i> Juan Ignacio Rojas, AR	16:30 - 16:30
P015	<b>Treatment-associated infections in NMOSD and MOGAD patients – retrospective analysis in an outpatient clinic cohort</b> <i>Speaker:</i> Daniel Engels, DE	16:30 - 16:30
P016	<b>Aquaporin-4 IgG seropositive neuromyelitis optica spectrum disorder and cancer: a data-driven investigation</b> <i>Speaker:</i> Alessandro Dinoto, IT	16:30 - 16:30
P017	<b>Most opticospinal demyelination is NMOSD, not MS - a 17-year UK longitudinal cohort study</b> <i>Speaker:</i> Mirasol Forcadela, GB	16:30 - 16:30
P018	<b>Mortality estimates in patients with anti-aquaporin-4 autoantibody positive neuromyelitis optica spectrum disorder</b> <i>Speaker:</i> Jacqueline Palace, GB	16:30 - 16:30
P019	<b>Long-term burden of attacks in patients with AQP4+ NMOSD: a simulation study based on results of a network meta-analysis</b> <i>Speaker:</i> Adrian Kielhorn, US	16:30 - 16:30
P020	<b>Cognition in patients with neuromyelitis optica spectrum disorders: a prospective longitudinal multicentre study of 217 patients (CogniNMO-Study)</b> <i>Speaker:</i> Martin W. Hümmert, DE	16:30 - 16:30
P021	<b>Dynamic MRI lesion evolution in paediatric MOG-Ab associated disease (MOGAD)</b> <i>Speaker:</i> Dimitrios Champsas, GB	16:30 - 16:30
P022	<b>Predicting the risk of long-term relapse in MOGAD</b> <i>Speaker:</i> Anna Francis, GB	16:30 - 16:30
P024	<b>Real-world data from the MSBase registry in MOG antibody-associated disease: First insights from the MOGAD substudy</b> <i>Speaker:</i> Barbara Willekens, BE	16:30 - 16:30
P025	<b>A novel index, neutrophil-to-nonneutrophil ratio (NNR) as the predictive markers of disease activity in myelin oligodendrocyte glycoprotein antibody-associated disease: comparable with neutrophil-to-lymphocyte ratio (NLR)</b> <i>Speaker:</i> Ju-Hong Min, KR	16:30 - 16:30
P026	<b>Tocilizumab treatment of MOGAD encephalitis non-responder to Anti CD-20 therapy: efficacy and safety during SARS-COV-2</b>	16:30 - 16:30

	<b>infection</b> <i>Speaker:</i> Giuseppe Schirò, IT	
P027	<b>Corpus callosum lesions in MOG antibody-associated disease versus AQP4-IgG+NMOSD and MS</b> <i>Speaker:</i> Nicholas H. Chia, US	16:30 - 16:30
P028	<b>Myelin oligodendrocyte glycoprotein antibody titers after immune globulin treatment: a case series</b> <i>Speaker:</i> Elias Sotirchos, US	16:30 - 16:30
P029	<b>MRI T2-Lesion evolution in paediatric MOG antibody-associated disease versus other demyelinating diseases</b> <i>Speaker:</i> Vyanka Redenbaugh, US	16:30 - 16:30
P030	<b>Bilateral optic neuritis is associated with more severe fatigue in patients with myelin oligodendrocyte glycoprotein antibody-associated disease</b> <i>Speaker:</i> Dimitrios C. Ladakis, US	16:30 - 16:30
P031	<b>Factors associated with depressive mood at onset of MS – an analysis of 781 patients of the German NationMS cohort</b> <i>Speaker:</i> Anke Salmen, CH	16:30 - 16:30
P032	<b>Exploring the presence of anosognosia among MS patients</b> <i>Speaker:</i> Cl?udia Coll Martinez, ES	16:30 - 16:30
P033	<b>Temprano – the amsterdam early relapsing-remitting multiple sclerosis cohort: an introduction on the cognitive and psychological functioning of the cohort</b> <i>Speaker:</i> Maureen van Dam, NL	16:30 - 16:30
P034	<b>How to translate PASAT scores into SDMT scores for follow-up of cognition in MS</b> <i>Speaker:</i> Guy Nagels, BE	16:30 - 16:30
P035	<b>Cognitive and MRI profile in primary and secondary progressive multiple sclerosis</b> <i>Speaker:</i> Damiano Mistri, IT	16:30 - 16:30
P036	<b>Thresholds for defining cognitive impairment in people with multiple sclerosis using an electronic version of a symbol substitution task</b> <i>Speaker:</i> Gogem Topcu, GB	16:30 - 16:30
P037	<b>Information processing speed in multiple sclerosis: the role of demographic, disease variables and cognitive reserve – longitudinal study</b> <i>Speaker:</i> Raz Haddif, IL	16:30 - 16:30
P038	<b>Hippocampal resting-state functional connectivity and its relation to episodic memory impairment in progressive multiple sclerosis</b> <i>Speaker:</i> Judit Salavedra Pont, ES	16:30 - 16:30
P039	<b>Repeated forms, testing intervals, and SDMT performance in a</b>	16:30 - 16:30

	<b>large multiple sclerosis dataset</b> <i>Speaker:</i> Tom Fuchs, US	
P040	<b>Association between dual-task performance, cognitive reserve, and cognitive function in people with multiple sclerosis</b> <i>Speaker:</i> Hilal Karakas, TR	16:30 - 16:30
P041	<b>Accelerated hippocampal atrophy in elderly onset multiple sclerosis patients</b> <i>Speaker:</i> Ermelinda De Meo, IT	16:30 - 16:30
P042	<b>Performance differences observed with fixed versus dynamic reference keys within Konectom smartphone-based cognitive processing speed test</b> <i>Speaker:</i> Aurélie Ruet, FR	16:30 - 16:30
P043	<b>Inadequate vaccine responses in children with multiple sclerosis</b> <i>Speaker:</i> Mellad Khoshnood, US	16:30 - 16:30
P044	<b>Association of hormonal dysregulation with clinical- and patient-reported outcomes in pediatric multiple sclerosis</b> <i>Speaker:</i> Neda Sattarnejhad, US	16:30 - 16:30
P045	<b>Depression and anxiety among adolescents with multiple sclerosis: the role of disease duration, disability and illness perception – dyadic study</b> <i>Speaker:</i> Raz Haddif, IL	16:30 - 16:30
P046	<b>Real-world effectiveness of ocrelizumab in a UK multi-centre paediatric-onset multiple sclerosis (POMS) cohort</b> <i>Speaker:</i> Omar Abdel-Mannan, GB	16:30 - 16:30
P047	<b>Focal cortical damage and intrathecal inflammation associate with disability progression independent of relapses in early multiple sclerosis: a preliminary study</b> <i>Speaker:</i> Anna Isabella Pisani, IT	16:30 - 16:30
P048	<b>Shedding light on the variability of the clinical course of multiple sclerosis: analysis of the influence of myeloid-derived suppressor cells on disease severity</b> <i>Speaker:</i> Maria Cristina Ortega, ES	16:30 - 16:30
P049	<b>Longitudinal evolution of progressive multiple sclerosis: deep understanding with machine learning</b> <i>Speaker:</i> Francesca Bovis, IT	16:30 - 16:30
P050	<b>Eight-year analyses of repeated confirmed disability progressions in the OPERA and ORATORIO studies and their open-label extensions</b> <i>Speaker:</i> Ludwig Kappos, CH	16:30 - 16:30
P051	<b>“Hidden” symptoms drive progression independent of relapse activity in relapsing-onset multiple sclerosis patients</b> <i>Speaker:</i> Emilio Portaccio, IT	16:30 - 16:30

P052	<b>Longer-term safety and efficacy of ofatumumab in recently diagnosed and treatment naïve patients is consistent with the overall population in the ALITHIOS open-label extension study</b> <i>Speaker:</i> Jutta Gärtner, DE	16:30 - 16:30
P053	<b>Progressive motor impairment from “critical” demyelinating lesions of the cervicomedullary junction</b> <i>Speaker:</i> Caitlin Jackson-Tarlton, US	16:30 - 16:30
P054	<b>Clinical characteristics and disability progression in late-onset MS</b> <i>Speaker:</i> Elena Flavia Mouresan, SE	16:30 - 16:30
P055	<b>Multiple sclerosis science: a unique opportunity to advance scientific developments and patient care</b> <i>Speaker:</i> Jeremy Hobart, GB	16:30 - 16:30
P056	<b>COVID-19 infection in MS patients and risk of following clinical/MRI disease activity: a propensity score matching study</b> <i>Speaker:</i> Chiara Bosa, IT	16:30 - 16:30
P057	<b>Early cortical and deep gray matter atrophy predicts disability progression independent of relapse in multiple sclerosis: a 17 year longitudinal study</b> <i>Speaker:</i> Damiano Marastoni, GB	16:30 - 16:30
P058	<b>Stratification of Long-term prognosis in patients with multiple sclerosis: a systematic review</b> <i>Speaker:</i> Saloua Mrabet, TN	16:30 - 16:30
P059	<b>A susceptibility network analysis of disease pathways leading to multiple sclerosis</b> <i>Speaker:</i> Ali Manouchehrinia, SE	16:30 - 16:30
P060	<b>Risk of inflammatory reactivation following SARS-CoV-2 vaccine in a large cohort of Multiple Sclerosis patients</b> <i>Speaker:</i> Dorian Landi, IT	16:30 - 16:30
P061	<b>Breakthrough COVID-19 infection after vaccination in people with multiple sclerosis on disease modifying therapies in Latin America: data from RELACOEM registry</b> <i>Speaker:</i> Juan Ignacio Rojas, AR	16:30 - 16:30
P062	<b>The interplay between multiple sclerosis, obstructive sleep apnea, and cognitive function: findings from the Nurses’ Health Study</b> <i>Speaker:</i> Monica Shieu, US	16:30 - 16:30
P063	<b>The relative contribution of comorbidities on sleep quality among people living with multiple sclerosis in Australia</b> <i>Speaker:</i> Baye dagnew Mekonnen, AU	16:30 - 16:30
P064	<b>MS and deprivation on the UK MS register : is wealth always the same as good health?</b> <i>Speaker:</i> Rod Middleton, GB	16:30 - 16:30

P065	<b>Online medical education reveals differences between neurologists and PCPs on knowledge, competence, and confidence of the impact of race and ethnicity in multiple sclerosis</b> <i>Speaker:</i> Thomas Finnegan, US	16:30 - 16:30
P067	<b>Epidemiology of multiple sclerosis in Iran in 2021</b> <i>Speaker:</i> Sharareh Eskandarieh, IR	16:30 - 16:30
P068	<b>Risk of stroke in multiple sclerosis (MS): a systematic review and meta-analysis</b> <i>Speaker:</i> Mahsa Ghajarzadeh, IR	16:30 - 16:30
P069	<b>Proportion of life and incidence of multiple sclerosis in canadian immigrants</b> <i>Speaker:</i> Dalia L. Rotstein, CA	16:30 - 16:30
P070	<b>Education and income prior to multiple sclerosis onset strongly affects disease severity</b> <i>Speaker:</i> Anna He, SE	16:30 - 16:30
P071	<b>Sex and age differences in the multiple sclerosis prodrome</b> <i>Speaker:</i> Fardowsa L A Yusuf, CA	16:30 - 16:30
P072	<b>The impact of changing diagnostic criteria on the incidence, prevalence and disease impact of multiple sclerosis using Welsh routine data</b> <i>Speaker:</i> James Witts, GB	16:30 - 16:30
P073	<b>Regional distribution of white matter lesions and microstructural abnormalities but not gray matter atrophy contribute to explain sex-related differences in cognitive performances in multiple sclerosis</b> <i>Speaker:</i> Paolo Preziosa, IT	16:30 - 16:30
P074	<b>Ovarian reserve determination by anti-mullerian hormone (AMH) assessment in women with relapsing-remitting multiple sclerosis at fertile age: multicenter, cross-sectional, case-control study</b> <i>Speaker:</i> Carolina Pelayo, CL	16:30 - 16:30
P075	<b>Interferon- or peginterferon-beta 1a exposure during pregnancy in women with multiple sclerosis: outcomes on child development</b> <i>Speaker:</i> Kerstin Hellwig, DE	16:30 - 16:30
P076	<b>Pregnancy in women with multiple sclerosis: recommendations from the french multiple sclerosis society</b> <i>Speaker:</i> Sandra Vukusic, FR	16:30 - 16:30
P077	<b>The patient perspective on family planning needs and priorities in multiple sclerosis: a combined quantitative and qualitative research study</b> <i>Speaker:</i> Ruth Dobson, GB	16:30 - 16:30

P078	<b>The association between reproductive characteristics and disability in iranian female patients with multiple sclerosis: a nationwide registry based cross-sectional study</b> <i>Speaker:</i> Sajjad Ghane Ezabadi, IR	16:30 - 16:30
P079	<b>Pregnancy substantially reduces the long-term risk of reaching confirmed EDSS 4</b> <i>Speaker:</i> Vilija G. Jokubaitis, AU	16:30 - 16:30
P080	<b>Expert opinion on the use of contraception in people with multiple sclerosis</b> <i>Speaker:</i> Jan Hillert, SE	16:30 - 16:30
P081	<b>Multiple sclerosis disease activity and disability following discontinuation of fingolimod for pregnancy</b> <i>Speaker:</i> Marianne Tokic, DE	16:30 - 16:30
P082	<b>Fertility, pregnancy and childbirth in women with multiple sclerosis: a population-based study from 2018 to 2020</b> <i>Speaker:</i> Marcello Moccia, GB	16:30 - 16:30
P084	<b>Aspects of life with focus on family planning and pregnancy among women with MS</b> <i>Speaker:</i> Katharina Fink, SE	16:30 - 16:30
P085	<b>Association of fatigue with MRI metrics in a large, real-world cohort of people with MS</b> <i>Speaker:</i> Alexandra Simpson, US	16:30 - 16:30
P086	<b>Fatigue prediction model based on CSF protein profile and MRI measures in early relapsing multiple sclerosis</b> <i>Speaker:</i> Valentina Camera, GB	16:30 - 16:30
P087	<b>Association between frailty and free-living walking performance in people with multiple sclerosis: a multicenter cross-sectional study</b> <i>Speaker:</i> Sharon Lynch, US	16:30 - 16:30
P088	<b>Validity of a graded exercise test to measure maximal oxygen consumption in persons with multiple sclerosis</b> <i>Speaker:</i> Marit Lea Schlagheck, DE	16:30 - 16:30
P089	<b>Measures of lower limb agility during the bipedal hop test corroborate subjective balance and mobility concerns in early multiple sclerosis</b> <i>Speaker:</i> Maria Williams, CA	16:30 - 16:30
P090	<b>Analytical validation of innovative magneto-inertial outcomes: a controlled environment study</b> <i>Speaker:</i> Margaux Poleur, BE	16:30 - 16:30
P091	<b>Novel method to measure sensorimotor integration among people with MS who report problems with hand dexterity</b> <i>Speaker:</i> Wendy Olamide Lasisi, CA	16:30 - 16:30
P092	<b>Key domains of gait in people with multiple sclerosis based on</b>	16:30 - 16:30

	<b>objective pressure sensitive walkway data</b> <i>Speaker:</i> Dirk Schriefer, DE	
P093	<b>Longitudinal association of intra-task measures derived from a technology-enabled 9-hole Peg test with disease progression and quality of life in multiple sclerosis</b> <i>Speaker:</i> Nolan Campbell, US	16:30 - 16:30
P094	<b>Personalized pathological maps obtained with T1 relaxometry provide correlates of disability in single multiple sclerosis patients</b> <i>Speaker:</i> Xin-Jie Chen, CH	16:30 - 16:30
P095	<b>Detecting ongoing disease activity in mildly affected multiple sclerosis patients under first-line therapies</b> <i>Speaker:</i> Marc Pawlitzki, DE	16:30 - 16:30
P096	<b>Change in gait-related parameters in relapsing-remitting multiple sclerosis patients in relation to clinical measures of progression as anchors</b> <i>Speaker:</i> Katrin Trentzsch, DE	16:30 - 16:30
P097	<b>Longitudinal clinical and MRI outcomes in relapsing multiple sclerosis patients after short-term ponesimod treatment interruption and re-initiation</b> <i>Speaker:</i> Ludwig Kappos, CH	16:30 - 16:30
P098	<b>Weak grip strength: a harbinger of lower limb agility dysfunction in people with multiple sclerosis having no gait impairment</b> <i>Speaker:</i> Evan Gordon MacKenzie, CA	16:30 - 16:30
P099	<b>Longitudinal assessment of balance impairment in multiple sclerosis identify patients with silent disease progression</b> <i>Speaker:</i> Elisabetta Mancuso, IT	16:30 - 16:30
P100	<b>Screening for cognitive impairment in an unselected cohort of patients with MS using BICAMS in outpatient neurology department, Dublin, Ireland</b> <i>Speaker:</i> Alexandra Asman, IE	16:30 - 16:30
P101	<b>IPAD-based processing speed test CogEval<sup>®</sup> as a potential predictor of multiple sclerosis in patients with clinically isolated syndrome</b> <i>Speaker:</i> Enric Monreal, ES	16:30 - 16:30
P102	<b>Existing claims-based algorithm may overestimate relapses in multiple sclerosis (MS) patients using infusible disease modifying therapies (DMTs) that require steroid premedication</b> <i>Speaker:</i> Carrie Hersh, US	16:30 - 16:30
P103	<b>Limitations in different life domains early in the disease course among people with multiple sclerosis in Sweden</b> <i>Speaker:</i> Emilie Friberg, SE	16:30 - 16:30



P104	<b>Multiple sclerosis, cognitive impairment and perceived cognitive impairment: factors that drive perception of cognitive impairment differ for self-perception in people with multiple sclerosis and clinicians treating people with multiple sclerosis</b> <i>Speaker:</i> Olivia Kaczmarek, US	16:30 - 16:30
P105	<b>Multiple sclerosis, accumulative cognitive impairment and shared decision-making: how the choice is made and what you don't realize about the process</b> <i>Speaker:</i> Olivia Kaczmarek, US	16:30 - 16:30
P106	<b>Capturing qualitative follow up data in a "real-world" study to assess disease modifying therapy use in the multiple sclerosis population before the pandemic and after: an update from the OPTIMISE:MS pharmacovigilance study</b> <i>Speaker:</i> Ruth Dobson, GB	16:30 - 16:30
P107	<b>Baseline characteristics of the SDMT PRO population reveal early cognitive changes in multiple sclerosis patients</b> <i>Speaker:</i> Iris-Katharina Penner, CH	16:30 - 16:30
P108	<b>Improvements in quality of life over 2 years in patients treated with cladribine tablets for highly active relapsing multiple sclerosis: Final analysis of CLARIFY-MS</b> <i>Speaker:</i> Jeannette Lechner-Scott, AU	16:30 - 16:30
P109	<b>A large cohort study evaluating patient reported perspectives on disease burden and early signs of progression in multiple sclerosis in Germany (MSPerspectives)</b> <i>Speaker:</i> Antonios Bayas, DE	16:30 - 16:30
P110	<b>Uncovering challenges in achieving health equity in multiple sclerosis care: a deep-dive into the experiences and perspectives of patients and their care teams in general neurology and MS specialty clinics</b> <i>Speaker:</i> Mitzi Williams, US	16:30 - 16:30
P111	<b>Evaluation of paramagnetic rim lesions as a marker of disability</b> <i>Speaker:</i> Riccardo Nistri, IT	16:30 - 16:30
P112	<b>Beyond clinical factors: the role of social support as a positive environmental factor in reducing work-related difficulties</b> <i>Speaker:</i> María Sol Román, AR	16:30 - 16:30
P113	<b>Enhancing information extraction from patient reported outcomes: the impact of COVID-19 on people with multiple sclerosis during the UK pandemic</b> <i>Speaker:</i> Annalaura Lerede, GB	16:30 - 16:30
P114	<b>Working life of people with multiple sclerosis during the COVID-19 pandemic: a cross-sectional survey of working-aged people with multiple sclerosis in Sweden</b> <i>Speaker:</i> Chantelle Murley, SE	16:30 - 16:30
P115	<b>Long-term visual outcomes and underlying structural correlates</b>	16:30 - 16:30

	<b>in relapse-onset multiple sclerosis</b> <i>Speaker:</i> Charmaine Yam, GB	
P116	<b>Anti- CD20 agents are associated with higher incidence and severity of breakthrough COVID-19 infections in vaccinated people with multiple sclerosis - an observational study by the New York Covid-19 Neuro-Immunology Consortium (NYCNIC)</b> <i>Speaker:</i> Sylvia Klineova, US	16:30 - 16:30
P117	<b>Polypharmacy and multiple sclerosis: a population-based study</b> <i>Speaker:</i> Anibal Chertcoff, AR	16:30 - 16:30
P118	<b>COVID-19 in multiple sclerosis: update from the nation-wide Austrian registry</b> <i>Speaker:</i> Gabriel Bsteh, AT	16:30 - 16:30
P119	<b>The 'Coronavirus disease of 2019' is associated with disability worsening in patients with multiple sclerosis</b> <i>Speaker:</i> Gertjan Peeters, BE	16:30 - 16:30
P120	<b>Polygenicity of comorbid depression in multiple sclerosis</b> <i>Speaker:</i> Kaarina Kowalec, CA	16:30 - 16:30
P121	<b>When to screen for osteoporosis in multiple sclerosis patients? A new risk score</b> <i>Speaker:</i> Anne Zinganell, AT	16:30 - 16:30
P122	<b>Remote assessment of the impact of lockdown measures on mental health in multiple sclerosis patients</b> <i>Speaker:</i> Rosa Gemma Viterbo, IT	16:30 - 16:30
P123	<b>Identification of distinct 2-year adherence profiles for smartphone sensor-based tests (Floodlight) in a study of people with progressive multiple sclerosis (CONSONANCE)</b> <i>Speaker:</i> Gregoire Pointeau, CH	16:30 - 16:30
P124	<b>Teleneurology as a tool to overcome disparities for access to multiple sclerosis care</b> <i>Speaker:</i> Marisa McGinley, US	16:30 - 16:30
P125	<b>MS-Selfie: a subscription-based online portal to assist people in the self-management of multiple sclerosis</b> <i>Speaker:</i> Gavin Giovannoni, GB	16:30 - 16:30
P126	<b>Hyaluronan mediates the modulation of T cell responses by inflammatory astrocytes in EAE?</b> <i>Speaker:</i> Jacqueline Reid, CA	16:30 - 16:30
P127	<b>Cross-regional homeostatic and reactive glial signatures in multiple sclerosis</b> <i>Speaker:</i> Tim Trobisch, DE	16:30 - 16:30
P128	<b>Multimodal bioinformatic analysis of clinical, neuropathology and molecular profiling of progressive MS</b> <i>Speaker:</i> Roberta Magliozzi, IT	16:30 - 16:30

P129	<b>Diffusely abnormal white matter and elevated grey matter demyelination imply rapid and severe progression in atypical multiple sclerosis</b> <i>Speaker:</i> Roberta Magliozzi, IT	16:30 - 16:30
P130	<b>Deciphering the relationship between haptoglobin genotype, myeloid cell iron uptake and lesion rim formation in multiple sclerosis</b> <i>Speaker:</i> Simon Hametner, AT	16:30 - 16:30
P131	<b>Evolutionarily conserved signatures of microglia in health and disease</b> <i>Speaker:</i> Victor Salinas, US	16:30 - 16:30
P132	<b>Siponimod favours expression of less pro-inflammatory, alternatively activated microglia in a microglia repopulation model of progressive multiple sclerosis - implication for neuroprotection</b> <i>Speaker:</i> Neele Heitmann, DE	16:30 - 16:30
P133	<b>?????Transcriptomic analysis reveals that RGC-32 regulates the expression of axonal guidance molecules in reactive astrocytes</b> <i>Speaker:</i> Alexandru Tatomir, US	16:30 - 16:30
P134	<b>Remibrutinib inhibits neuroinflammation driven by B cells and myeloid cells in preclinical models of multiple sclerosis</b> <i>Speaker:</i> Bruno Cenni, CH	16:30 - 16:30
P135	<b>Influence of diet and MOG<sub>35-55</sub>-peptide preparation on severity, survival, incidence and body weight in murine experimental autoimmune encephalomyelitis</b> <i>Speaker:</i> Mariella Martorelli, DE	16:30 - 16:30
P136	<b>Aquaporin-4 prevents exaggerated astrogliosis and structural damage in retinal inflammation</b> <i>Speaker:</i> Ali Afzali, DE	16:30 - 16:30
P137	<b>Investigation of stem cell mobilization using G-CSF and plerixafor in experimental autoimmune encephalomyelitis</b> <i>Speaker:</i> Sarah Marie Oberhagemann, DE	16:30 - 16:30
P138	<b>Changes of demyelination in the entire visual pathway in the cuprizone-induced mouse model of multiple sclerosis</b> <i>Speaker:</i> Roshana Vander Wall, AU	16:30 - 16:30
P139	<b>Extensive evidence for aberrant B cell hypomethylation in relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Ewoud Ewing, SE	16:30 - 16:30
P140	<b>Cellular signature changes in non-lesional tissue from multiple sclerosis donors revealed by single-nucleus RNA-seq and spatial transcriptomics</b> <i>Speaker:</i> Matti Lam, US	16:30 - 16:30

P141	<b>Limited cross-ancestry portability of european-derived multiple sclerosis polygenic risk scores: a study in ~50,000 individuals of south asian ancestry from the Genes &amp; Health cohort</b> <i>Speaker:</i> Joshua Breedon, GB	16:30 - 16:30
P142	<b>Tissue specific splicing of genes implicated in determining the severity of multiple sclerosis</b> <i>Speaker:</i> Raghda Al-Najjar, GB	16:30 - 16:30
P143	<b>Somatic mutations in STAT3 are common in CD8+ cells in multiple sclerosis patients and controls</b> <i>Speaker:</i> Pentti Tienari, FI	16:30 - 16:30
P144	<b>Prediction of conversion from optic neuritis to multiple sclerosis: novel application of a genetic risk score</b> <i>Speaker:</i> Pavel Loginovic, GB	16:30 - 16:30
P145	<b>Implication of DNA methylation changes at chromosome 1q21.1 in the brain pathology of primary progressive multiple sclerosis</b> <i>Speaker:</i> Majid Pahlevan Kakhki, SE	16:30 - 16:30
P146	<b>Cellular immune profiling reveals effector memory CD8<sup>+</sup>CCR5<sup>+</sup> T-cell effect of ocrelizumab in early relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Alexandra Garcia, FR	16:30 - 16:30
P147	<b>B cells infiltrating the MS brain: from local maturation to targeting by evobrutinib????</b> <i>Speaker:</i> Laurens Bogers, NL	16:30 - 16:30
P148	<b>Reduced Treg suppressive capacity exacerbates B cell dysfunction in multiple sclerosis</b> <i>Speaker:</i> Viktoria Greeck, DE	16:30 - 16:30
P149	<b>COVID-19 severity and vaccination effect in persons with MS treated with alemtuzumab</b> <i>Speaker:</i> Maria Pia Sormani, IT	16:30 - 16:30
P150	<b>Longitudinal COVID-19 immune trajectories in autoimmune patients on anti-CD20 therapy</b> <i>Speaker:</i> Esther Melamed, US	16:30 - 16:30
P152	<b>NK-like CD8+ T cells with high cytotoxic properties are the reservoir of clonal cells and related to disease activity in multiple sclerosis</b> <i>Speaker:</i> Emilie Dugast, FR	16:30 - 16:30
P153	<b>Brain-specific T cells from multiple sclerosis patients have a T central memory phenotype and express adhesion molecules and chemokine receptors necessary for migration to brain</b> <i>Speaker:</i> John Lindsey, US	16:30 - 16:30
P154	<b>Evaluation of the clonal architecture of T-cell repertoire in multiple sclerosis patients experiencing relapses</b> <i>Speaker:</i> Federica Esposito, IT	16:30 - 16:30

P155	<b>Quantitative proteomics reveals protein dysregulation during T cell activation in multiple sclerosis patients compared to healthy controls</b> <i>Speaker:</i> Tone Berge, NO	16:30 - 16:30
P156	<b>Re-visiting ??-crystallin: EBNA1 antibody cross-reactivity and CRYAB-specific T cell responses in multiple sclerosis</b> <i>Speaker:</i> Olivia Thomas, SE	16:30 - 16:30
P157	<b>Investigating the T cell response to Anoctamin-2 and Epstein-Barr virus nuclear antigen 1 in multiple sclerosis using antigen-coupled beads</b> <i>Speaker:</i> Olivia Thomas, SE	16:30 - 16:30
P158	<b>Novel CD20+ innate lymphoid cells show increased killing capacity and are related to multiple sclerosis prognosis</b> <i>Speaker:</i> Atay Vural, TR	16:30 - 16:30
P159	<b>Single-cell RNA sequencing of peripheral CD8+ T cells of MS-discordant monozygotic twins reveals disease-associated alterations in immune signaling</b> <i>Speaker:</i> Vladyslav Kavaka, DE	16:30 - 16:30
P160	<b>Characterization of immunosenescence trajectories in diverse adults and patients with multiple sclerosis</b> <i>Speaker:</i> Hanane Touil, US	16:30 - 16:30
P161	<b>Computational prediction of molecular mimicry in chronic, neurotropic, and commensal pathogens as a link to autoimmunity</b> <i>Speaker:</i> Cole Maguire, US	16:30 - 16:30
P162	<b>Epstein-Barr virus and multiple sclerosis in a spanish cohort. A two-years longitudinal study</b> <i>Speaker:</i> Roberto Alvarez-Lafuente, ES	16:30 - 16:30
P163	<b>Oral microbiome characterization in multiple sclerosis patients</b> <i>Speaker:</i> Léo Boussamet, FR	16:30 - 16:30
P164	<b>Short-chain fatty acids (SCFAs): propionate, butyrate, and acetate are associated with clinical, radiological, and immunological parameters in multiple sclerosis patients</b> <i>Speaker:</i> Roberto Alvarez Lafuente, ES	16:30 - 16:30
P165	<b>MS-associated gut microbiome in the Israeli population and inter-relationship with diet</b> <i>Speaker:</i> Zehavit Nitzan, IL	16:30 - 16:30
P166	<b>Modulation of the peripheral blood immune cell transcriptome by vitamin D supplementation in people with a first demyelinating event</b> <i>Speaker:</i> Wei Yeh, AU	16:30 - 16:30
P167	<b>The impact of air pollution on COVID-19 severity among infected individuals in a population of italian MS patients</b>	16:30 - 16:30

	<i>Speaker:</i> Marta Ponzano, IT	
P168	<b>The effects of different types of smoking on recovery from multiple sclerosis attack</b> <i>Speaker:</i> Elnaz Asadollahzadeh, IR	16:30 - 16:30
P169	<b>Randomized clinical trial of intermittent energy restriction in people with multiple sclerosis</b> <i>Speaker:</i> Laura Ghezzi, US	16:30 - 16:30
P170	<b>Waterpipe and cigarette smoking and the risk of primary progressive multiple sclerosis: a population-based case-control study</b> <i>Speaker:</i> Mohammad Ali Sahraian, IR	16:30 - 16:30
P171	<b>Weight during childhood and adolescence is associated with multiple sclerosis risk and disease course in a cohort patients of the same age</b> <i>Speaker:</i> Floor C. Loonstra, NL	16:30 - 16:30
P172	<b>Dietary factors in childhood are associated with multiple sclerosis risk and age of onset</b> <i>Speaker:</i> Floor C. Loonstra, NL	16:30 - 16:30
P173	<b>Effect of in silico depletion of lymphocyte subpopulations on the immune gene regulatory networks in chronic active MS lesions</b> <i>Speaker:</i> Edoardo Pedrini, IT	16:30 - 16:30
P174	<b>Evaluating the effect of a Bruton's tyrosine kinase inhibitor in a murine experimental autoimmune encephalomyelitis model of multiple sclerosis</b> <i>Speaker:</i> Dmitry Ofengeim, US	16:30 - 16:30
P175	<b>Chitinase-3 like 1 is neurotoxic in hiPSC-derived neuronal cultures</b> <i>Speaker:</i> Rucsanda Pinteac, ES	16:30 - 16:30
P176	<b>CHI3L1 driven reactive astrocytes modulate OPC differentiation and myelination</b> <i>Speaker:</i> Clara Matute-Blanch, ES	16:30 - 16:30
P177	<b>IL-17-dependent modulation of the basal ganglia network: implications for multiple sclerosis</b> <i>Speaker:</i> Andrea Mancini, IT	16:30 - 16:30
P178	<b>Characterizing the immunomodulation and remyelination efficacy of 20-<math>\beta</math>-Hydroxycholesterol in pre-clinical models of multiple sclerosis</b> <i>Speaker:</i> Simon G Gregory, US	16:30 - 16:30
P179	<b>Women have higher brain reserve against functional decline in MS than men</b> <i>Speaker:</i> Victoria Leavitt, US	16:30 - 16:30
P180	<b>The effect of alemtuzumab treatment on neurodegeneration in</b>	16:30 - 16:30

	<b>relapsing remitting multiple sclerosis: real-world data from a five-year prospective one center study</b> <i>Speaker:</i> Sofia Sandgren, SE	
P181	<b>Intranasal administration allows rapid transport of anti-Nogo-A antibody and cell signaling modulation in the CNS of EAE mice</b> <i>Speaker:</i> Sebastian Spiegel, CH	16:30 - 16:30
P182	<b>Cognitive reserve modulates the impact of frontal lobe damage on executive functioning in multiple sclerosis</b> <i>Speaker:</i> Paolo Preziosa, IT	16:30 - 16:30
P183	<b>Gene expression profiling of MS lesions for identification of pro-remyelinating factors</b> <i>Speaker:</i> Alida Chen, NL	16:30 - 16:30
P184	<b>Galectin-4: a novel target to promote remyelination in MS lesions?</b> <i>Speaker:</i> Wia Baron, NL	16:30 - 16:30
P185	<b>Diagnostic performance of central vein sign versus oligoclonal bands for multiple sclerosis</b> <i>Speaker:</i> Karlo Toljan, US	16:30 - 16:30
P186	<b>3 Tesla T<sub>1</sub> / T<sub>2</sub> ratio imaging improves cortical lesion contrast in multiple sclerosis</b> <i>Speaker:</i> Abigail R Manning, US	16:30 - 16:30
P187	<b>Myelin water fraction of the corpus callosum is a robust measure of remyelination in a double-blind placebo-controlled clinical trial</b> <i>Speaker:</i> Christian Cordano, US	16:30 - 16:30
P188	<b>Effect of ibudilast on slowly-evolving lesions in progressive multiple sclerosis</b> <i>Speaker:</i> Kunio Nakamura, US	16:30 - 16:30
P189	<b>Investigating normal appearing white matter using intensity scaled T1-weighted magnetic resonance images in multiple sclerosis</b> <i>Speaker:</i> Tun Wiltgen, DE	16:30 - 16:30
P190	<b>Lesion evolution on MRI in multiple sclerosis with separation of myelin and iron</b> <i>Speaker:</i> Ziyang Zhu, CA	16:30 - 16:30
P191	<b>Characterization of brain T2 lesions suggestive of demyelination in presymptomatic patients: the radiologically isolated syndrome cohort</b> <i>Speaker:</i> Christine LEBRUN-FRENAY, FR	16:30 - 16:30
P192	<b>Networks of myelin covariance in relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Lester Melie-Garcia, CH	16:30 - 16:30
P193	<b>The impact of adult-onset multiple sclerosis on intracranial</b>	16:30 - 16:30

	<b>volume: results from an MRI study in clinically discordant monozygotic twins</b> <i>Speaker:</i> Lisa Ann Gerdes, DE	
P194	<b>Toward a joint automated assessment of cortical and paramagnetic rim lesions with 7T MRI</b> <i>Speaker:</i> Francesco La Rosa, CH	16:30 - 16:30
P195	<b>Voxel-wise multimodal MRI reveals specific patterns of brain damage in the main multiple sclerosis phenotypes</b> <i>Speaker:</i> Monica Margoni, IT	16:30 - 16:30
P196	<b>An in-vivo ultrahigh-resolution window into the infratentorial MS brain</b> <i>Speaker:</i> María Inés Gaitán, AR	16:30 - 16:30
P197	<b>Upper cervical spinal cord atrophy in early-stage relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Rozanna Meijboom, GB	16:30 - 16:30
P198	<b>Detection of lesions in the optic nerve with magnetic resonance imaging using a 3D convolutional neural network</b> <i>Speaker:</i> Gerard Martí-Juan, ES	16:30 - 16:30
P199	<b>Using The Virtual Brain to study the relationship between structural and functional connectivity in people with multiple sclerosis: a multicentre study</b> <i>Speaker:</i> Gerard Martí-Juan, ES	16:30 - 16:30
P200	<b>Correspondence between gray matter atrophy and neurotransmitter maps is relevant in multiple sclerosis</b> <i>Speaker:</i> Paolo Preziosa, IT	16:30 - 16:30
P201	<b>Comparison between microscopic and tensor diffusion anisotropy measures to quantify lesion volume across white matter bundles</b> <i>Speaker:</i> Eloy Martinez-Heras, ES	16:30 - 16:30
P202	<b>Quantification of thalamic volume in multiple sclerosis: from the multicenter INNI dataset towards the clinical application</b> <i>Speaker:</i> Loredana Storelli, IT	16:30 - 16:30
P203	<b>Spinal cord myelin imaging in patients with multiple sclerosis using [<sup>11</sup>C]MeDAS PET</b> <i>Speaker:</i> Kars van der Weijden, NL	16:30 - 16:30
P204	<b>An evaluation of the impact of MRI field strength and contrast delay on visualization of meningeal enhancement in multiple sclerosis</b> <i>Speaker:</i> Daniel Harrison, US	16:30 - 16:30
P205	<b>Serum neurofilament light associates with increased TSPO-PET measurable microglial activation in multiple sclerosis brain</b> <i>Speaker:</i> Maija Saraste, FI	16:30 - 16:30
P206	<b>Quantitative susceptibility mapping demonstrates the</b>	16:30 - 16:30



	<b>significance of thalamic pathology in patients with secondary progressive multiple sclerosis: baseline analysis from the MS-STAT2 randomised controlled trial</b> <i>Speaker:</i> Thomas Williams, GB	
P207	<b>The effect of natalizumab, fingolimod and first-line treatment on brain atrophy in patients with multiple sclerosis</b> <i>Speaker:</i> Samantha Noteboom, NL	16:30 - 16:30
P208	<b>Feasibility of detecting atrophy relevant for disability and cognition on 3D-FLAIR</b> <i>Speaker:</i> Samantha Noteboom, NL	16:30 - 16:30
P209	<b>Assessing the performance of an automated decision-support system for detecting active T2 lesions on non-standardized MRI systems and field strengths</b> <i>Speaker:</i> Sergi Valverde, ES	16:30 - 16:30
P210	<b>Predominantly spinal cord MRI phenotype of multiple sclerosis</b> <i>Speaker:</i> Michaela Andelova, CZ	16:30 - 16:30
P211	<b>Hypodiamagnetism on T2*-separation: a potential marker for the differential diagnosis between MS and NMOSD</b> <i>Speaker:</i> Woojun Kim, KR	16:30 - 16:30
P212	<b>Predicting cognition from structural disconnectivity metrics and estimated functional connectivity networks</b> <i>Speaker:</i> Ceren Tozlu, US	16:30 - 16:30
P213	<b>Structural disconnection due to chronic active lesions may occur relatively earlier in disability progression in multiple sclerosis than structural disconnection due to inactive lesions</b> <i>Speaker:</i> Ceren Tozlu, US	16:30 - 16:30
P214	<b>Longitudinal voxel-based white matter damage predicts cognitive decline in multiple sclerosis</b> <i>Speaker:</i> Ismail Koubiyr, FR	16:30 - 16:30
P215	<b>Spinal cord atrophy predicts silent progression in relapse-onset multiple sclerosis</b> <i>Speaker:</i> Antje Bischof, US	16:30 - 16:30
P216	<b>Distribution of cortical lesions across functional networks is non-random and related to cognitive impairment</b> <i>Speaker:</i> Albulena Bajrami, IT	16:30 - 16:30
P217	<b>Thalamic node strength connectivity is altered in cognitive impaired MS patients</b> <i>Speaker:</i> Antonia L. Wenger, CH	16:30 - 16:30
P218	<b>Predictors of paramagnetic rim lesion formation following gadolinium-enhancing lesions</b> <i>Speaker:</i> Maria Antonietta Mazzola, US	16:30 - 16:30
P219	<b>Comparison of two high resolution MRI techniques in optic neuritis</b>	16:30 - 16:30

	<i>Speaker:</i> Achim Gass, DE	
P220	<b>Cross-sectional robustness of 6 freely available software packages for brain volume measurements in multiple sclerosis</b> <i>Speaker:</i> David Rudolf van Nederpelt, NL	16:30 - 16:30
P221	<b>The effect of ocrelizumab versus oral highly active immunotherapies on white matter microstructure in relapsing remitting multiple sclerosis</b> <i>Speaker:</i> Caterina Lapucci, IT	16:30 - 16:30
P222	<b>Evaluating Central Vein Sign accuracy in pediatric onset multiple sclerosis (POMS) diagnosis</b> <i>Speaker:</i> Caterina Lapucci, IT	16:30 - 16:30
P223	<b>Alterations in nuclei-specific thalamic resting-state functional connectivity in multiple sclerosis: implications for clinical disability and cognition</b> <i>Speaker:</i> Elsa Salim Karam, US	16:30 - 16:30
P224	<b>Multiple sclerosis MRI reports vary among neuroradiologists</b> <i>Speaker:</i> Kelly Leyden, US	16:30 - 16:30
P225	<b>A DenseNet-based prediction of gadolinium-enhancing lesions presence</b> <i>Speaker:</i> Merjem Begovic, CH	16:30 - 16:30
P226	<b>Impact of lesion damages along the whole motor pathways on disability in multiple sclerosis</b> <i>Speaker:</i> Malo Gaubert, FR	16:30 - 16:30
P227	<b>A novel deep learning algorithm for multi-modal multiple sclerosis lesion segmentation</b> <i>Speaker:</i> Carlos Santos García, FR	16:30 - 16:30
P228	<b>On the association between the choroid plexus volume and disease characteristics in multiple sclerosis</b> <i>Speaker:</i> Jannis Müller, CH	16:30 - 16:30
P229	<b>Comparison of unwrapped phase and quantitative susceptibility mapping for paramagnetic rim lesion detection in patients with multiple sclerosis</b> <i>Speaker:</i> Selina Leber, CH	16:30 - 16:30
P230	<b>Leptomeningeal enhancement in progressive multiple sclerosis is associated with higher risk of future disability progression and persists on Long term follow-up despite high efficacy therapies</b> <i>Speaker:</i> Marco Vercellino, IT	16:30 - 16:30
P231	<b>MRI detected cortical lesions are associated with higher serum neurofilament levels in multiple sclerosis</b> <i>Speaker:</i> Océane Perdaens, BE	16:30 - 16:30
P232	<b>Thalamic myelin and neurite content is reduced in progressive multiple sclerosis and relates to disability and cognitive</b>	16:30 - 16:30

	<b>impairment</b> <i>Speaker:</i> Alessandro Cagol, CH	
P233	<b>Sensitivity of portable ultra-low-field magnetic resonance imaging for white matter lesions, dissemination in space, and dissemination in time</b> <i>Speaker:</i> Serhat V. Okar, US	16:30 - 16:30
P234	<b>Medulla oblongata volume measured from clinical routine T2-FLAIR scans is associated with disability progression in a multiple sclerosis real-world dataset</b> <i>Speaker:</i> Niels Bergsland, US	16:30 - 16:30
P235	<b>Co-localization of TSPO-PET-detectable chronic active lesions and QSM-MRI-detectable iron rim lesions in multiple sclerosis brain</b> <i>Speaker:</i> Parisa Hariri, FI	16:30 - 16:30
P236	<b>Evaluation of a supervised approach based on the application of CNN for the recognition of new T2 lesions in patients with multiple sclerosis using different MR magnets</b> <i>Speaker:</i> Alex Rovira, ES	16:30 - 16:30
P237	<b>Identify surface-in alterations in normal appearing white matter using multiple quantitative and semi-quantitative MRI metrics</b> <i>Speaker:</i> Agnese Tamanti, IT	16:30 - 16:30
P238	<b>Association between cerebral blood flow and clinical disability in progressive multiple sclerosis in the MS-OPT Trial baseline data</b> <i>Speaker:</i> Alessia Bianchi, GB	16:30 - 16:30
P239	<b>Asymptomatic optic nerve lesion detected on OCT in CIS predicts CDMS</b> <i>Speaker:</i> Olivier Outteryck, FR	16:30 - 16:30
P240	<b>Prognostication of disease activity in multiple sclerosis using retinal layer thickness z-scores</b> <i>Speaker:</i> Ting-Yi Lin, DE	16:30 - 16:30
P241	<b>Anterior and posterior visual pathway involvement in myelin oligodendrocyte glycoprotein antibody disorders (MOGAD) patients: an OCT and MRI study</b> <i>Speaker:</i> Luca Bollo, ES	16:30 - 16:30
P242	<b>Association of iron rim lesions and retinal layer thickness in relapsing multiple sclerosis</b> <i>Speaker:</i> Nik Krajnc, AT	16:30 - 16:30
P243	<b>Optical coherence tomography's quality control in a multicenter study of neuromyelitis optica spectrum disorders</b> <i>Speaker:</i> Hadi Salih, DE	16:30 - 16:30
P244	<b>OSCAR-MP – a proposal of quality criteria for retinal optical coherence tomography angiography</b>	16:30 - 16:30

	<i>Speaker:</i> Rebecca Wicklein, DE	
P245	<b>Rate of retinal layer thinning as a biomarker for conversion to progressive disease in multiple sclerosis</b> <i>Speaker:</i> Nabil El Ayoubi, LB	16:30 - 16:30
P246	<b>Usefulness of optical coherence tomography in pediatric patients with an acquired demyelinating syndrome</b> <i>Speaker:</i> Elianet Fonseca Perez, CL	16:30 - 16:30
P247	<b>Retinal optical coherence tomography and visual evoked potentials as prognostic markers of future relapses in early multiple sclerosis</b> <i>Speaker:</i> Hanna Gwendolyn Zimmermann, DE	16:30 - 16:30
P248	<b>Coagulation activation in relapsing-remitting multiple sclerosis with relapse-associated lymphopenia</b> <i>Speaker:</i> Tatiana Koudriavtseva, IT	16:30 - 16:30
P249	<b>A novel signature of lipoxin A<sub>4</sub> and prostaglandin E<sub>2</sub> in plasma associated with disease severity in patients with relapsing-remitting and secondary progressive multiple sclerosis</b> <i>Speaker:</i> Jelle. Y Broos, NL	16:30 - 16:30
P250	<b>Using metabolomic and transcriptomic profiles to predict development of anti-drug antibodies in people with relapsing remitting multiple sclerosis</b> <i>Speaker:</i> Leda Coelewij, GB	16:30 - 16:30
P251	<b>Investigation of serum based proteomic biomarker signatures relative to steroid responsiveness and disease activity status in relapsing multiple sclerosis patients</b> <i>Speaker:</i> Ferhan Qureshi, US	16:30 - 16:30
P252	<b>The CXCR7 antagonist ACT-1004-1239 increases CXCL12 levels in the CNS and promotes myelination</b> <i>Speaker:</i> Laetitia Pouzol, CH	16:30 - 16:30
P253	<b>Serum neurofilament light chain and glial fibrillary acidic protein are associated with future brain atrophy and T2 lesion volume in progressive multiple sclerosis patients</b> <i>Speaker:</i> Tanuja Chitnis, US	16:30 - 16:30
P254	<b>Prognostic value of neurofilament light and glial fibrillary acidic protein for disability worsening PIRA by age range in multiple sclerosis</b> <i>Speaker:</i> Tanuja Chitnis, US	16:30 - 16:30
P255	<b>Impact of estimated blood volume and body mass index on glial fibrillary acidic protein and neurofilament light chain measurements in serum and cerebrospinal fluid of multiple sclerosis patients</b> <i>Speaker:</i> Yavor Yalachkov, DE	16:30 - 16:30
P256	<b>Blood neurofilament light levels predict non-relapsing progression following anti-CD20 therapy in relapsing and</b>	16:30 - 16:30

	<b>primary progressive multiple sclerosis: findings from the ocrelizumab randomised, double-blind phase 3 clinical trials</b> <i>Speaker:</i> Amit Bar-Or, US	
P257	<b>Increased intrathecal neurofilament light and IgM predict severe disability in relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Igal Rosenstein, SE	16:30 - 16:30
P258	<b>Differential diagnosis of MS patients versus disease state controls and classification of MS subtypes using serum proteomics</b> <i>Speaker:</i> Ferhan Qureshi, US	16:30 - 16:30
P259	<b>Clinical implication of serum neurofilament light chain and glial fibrillary acidic protein in idiopathic transverse myelitis</b> <i>Speaker:</i> Keon-Woo Kim, KR	16:30 - 16:30
P260	<b>Small extracellular vesicles derived from b naïve and memory lymphocytes in multiple sclerosis relapse and remission patients as potential plasma biomarkers</b> <i>Speaker:</i> Ines Gonzalez-Suárez, ES	16:30 - 16:30
P261	<b>Serum glial fibrillary acidic protein levels in clinically presumed MRI-negative attacks in neuromyelitis optica spectrum disorder</b> <i>Speaker:</i> Su-Hyun Kim, KR	16:30 - 16:30
P262	<b>Clinical course of idiopathic acute transverse myelitis in adults with myelin oligodendrocyte glycoprotein antibody, aquaporin-4 antibody, and seronegative</b> <i>Speaker:</i> Marcell Guimarães, BR	16:30 - 16:30
P263	<b>Cerebrospinal fluid B cell and neuroaxonal damage biomarkers: correlation with relapses and long-term disability in Multiple Sclerosis</b> <i>Speaker:</i> Krzysztof Smolik, IT	16:30 - 16:30
P264	<b>Plasma cytokine release is differentially reduced in non-active primary Progressive multiple sclerosis with elevated oxidative stress levels in cerebrospinal fluid</b> <i>Speaker:</i> Albert Miguela Benavides, ES	16:30 - 16:30
P265	<b>Serum glial fibrillary acidic protein is associated with afferent visual system damage in neuromyelitis optica spectrum disorder only in eyes without prior optic neuritis</b> <i>Speaker:</i> Patrick Schindler, DE	16:30 - 16:30
P266	<b>Csf and serum biomarkers in human neural stem cell-treated secondary progressive multiple sclerosis patients</b> <i>Speaker:</i> Giada D'Aloisio, IT	16:30 - 16:30
P267	<b>Diagnostic biomarker in cerebrospinal fluid in late-onset and progressive multiple sclerosis including the intrathecal fraction of free light chains kappa</b> <i>Speaker:</i> Franz Felix Konen, DE	16:30 - 16:30

P268	<b>The diagnostic utility of kappa free light chains in people with multiple sclerosis and other neuroinflammatory disorders</b> <i>Speaker:</i> Franz Felix Konen, DE	16:30 - 16:30
P269	<b>Using serum metabolomic signatures to classify multiple sclerosis progression using machine learning models</b> <i>Speaker:</i> Alexandra Elizabeth Oppong, GB	16:30 - 16:30
P270	<b>Neurofilament light chain and platelet-derived growth factor receptor ? for monitoring disease activity in relapsing-remitting multiple sclerosis: a prospective single center study</b> <i>Speaker:</i> Thea Stenberg, SE	16:30 - 16:30
P271	<b>Visual magnetic evoked responses as a biomarker of functional changes after an acute optic neuritis</b> <i>Speaker:</i> Ysoline Beigneux, FR	16:30 - 16:30
P272	<b>Role of circulating extracellular vesicles as specific biomarkers of multiple sclerosis</b> <i>Speaker:</i> Gabriel Torres Iglesias, ES	16:30 - 16:30
P273	<b>Immune and nervous system-derived Extracellular Vesicles could act as diagnostic biomarkers and may provide information on disease activity and neurological dysfunction in multiple sclerosis</b> <i>Speaker:</i> Gabriel Torres Iglesias, ES	16:30 - 16:30
P274	<b>Bedside digital videorecography could be a biomarker of neurodegenerescence in early multiple sclerosis patients</b> <i>Speaker:</i> Mikael Cohen, FR	16:30 - 16:30
P275	<b>Digital biomarkers are associated with regional brain atrophy in radiologically isolated syndrome</b> <i>Speaker:</i> Mikael Cohen, FR	16:30 - 16:30
P276	<b>Molecular imaging of microglia activation in patients with multiple sclerosis before and after high efficacy treatment with ocrelizumab</b> <i>Speaker:</i> Freja Jespersen, DK	16:30 - 16:30
P277	<b>Ageing and multiple sclerosis, a prospective study</b> <i>Speaker:</i> Maria Agustina Piedrabuena, AR	16:30 - 16:30
P278	<b>The eye as a digital biomarker for multiple sclerosis: oculomotor behaviours yield a novel digital biomarker for detecting and monitoring high-level motor and cognitive alterations</b> <i>Speaker:</i> Gerardo Fernandez, AR	16:30 - 16:30
P279	<b>Early prediction of multiple sclerosis using scanning laser ophthalmoscopy (SLO) video sequence data with a Deep Learning (DL) based approach</b> <i>Speaker:</i> Christy Sheehy, US	16:30 - 16:30
P280	<b>Visual and motor evoked potentials in experimental</b>	16:30 - 16:30

	<b>autoimmune encephalomyelitis</b> <i>Speaker:</i> Elena Rossi, IT	
P281	<b>Pain and the Brain: pain shifts the balance of Brain excitability in multiple sclerosis</b> <i>Speaker:</i> Hannah M. Murphy, CA	16:30 - 16:30
P282	<b>Immunadsorption versus double-dose methyl prednisolone in steroid-refractory multiple sclerosis relapses: results from the INCIDENT-MS study</b> <i>Speaker:</i> Steffen Pfeuffer, DE	16:30 - 16:30
P283	<b>Ocrelizumab and hypogammaglobulinemia: a real-world retrospective MS cohort study</b> <i>Speaker:</i> Steven Nobile, CA	16:30 - 16:30
P284	<b>Intravenous immunoglobulin treatment in pregnancy and the post-partum period reduces relapse rates in women with multiple sclerosis</b> <i>Speaker:</i> Shay Menascu, IL	16:30 - 16:30
P285	<b>Treatment-naïve patients with early-stage relapsing-remitting multiple sclerosis showed low disease activity after 2-year ocrelizumab therapy, with no new safety signals; the Phase IIIb ENSEMBLE study</b> <i>Speaker:</i> Hans-Peter Hartung, DE	16:30 - 16:30
P286	<b>Autologous hematopoietic stem cell transplantation in relapsing remitting multiple sclerosis patients: ? single centre experience</b> <i>Speaker:</i> Sofia Mavromati, SE	16:30 - 16:30
P287	<b>Cladribine and pregnancy in women with multiple sclerosis – a case series from Germany</b> <i>Speaker:</i> Kerstin Hellwig, DE	16:30 - 16:30
P288	<b>Sustained low relapse rate with highly variable B cell re-population dynamics with extended rituximab dosing intervals in multiple sclerosis</b> <i>Speaker:</i> Chiara Starvaggi Cucuzza, SE	16:30 - 16:30
P289	<b>Efficacy and safety of ocrelizumab is maintained in patients with RRMS with suboptimal response to prior disease-modifying therapies: 4-year NEDA data from CASTING-LIBERTO</b> <i>Speaker:</i> Celia Oreja-Guevara, ES	16:30 - 16:30
P290	<b>Functional systems scores and expanded disability status scale score evaluations in the ultimate I and II studies of ublituximab versus teriflunomide in participants with relapsing multiple sclerosis</b> <i>Speaker:</i> Bruce A. C. Cree, US	16:30 - 16:30
P291	<b>Autologous hematopoietic stem cell transplantation does not affect paramagnetic rim lesion number in aggressive multiple sclerosis: a pilot study</b> <i>Speaker:</i> Alice Mariottini, IT	16:30 - 16:30

P292	<b>MRI, efficacy, and safety of tolebrutinib in patients with highly active disease (HAD): 2-year data from the phase 2b Long-term safety (LTS) Study</b> <i>Speaker:</i> Robert J. Fox, US	16:30 - 16:30
P293	<b>IL-6 receptor antagonism prevents neurological disease in mice with AQP4 peptide immunization</b> <i>Speaker:</i> Kenichi Serizawa, JP	16:30 - 16:30
P294	<b>Immunological consequences of cladribine treatment in multiple sclerosis: a real-world study</b> <i>Speaker:</i> Leoni Rolfes, DE	16:30 - 16:30
P295	<b>Disability changes in the absence of relapse in the phase 3 ULTIMATE I and II studies of ublituximab versus teriflunomide in participants with relapsing multiple sclerosis</b> <i>Speaker:</i> Sibyl E. Wray, US	16:30 - 16:30
P296	<b>Lack of rebound disease activity in patients with relapsing multiple sclerosis following placebo run-out in the tolebrutinib phase 2b trial</b> <i>Speaker:</i> Anthony Traboulsee, CA	16:30 - 16:30
P297	<b>MRI outcomes from the long-term extension study of tolebrutinib in patients with relapsing multiple sclerosis: 2-year results</b> <i>Speaker:</i> Daniel S. Reich, US	16:30 - 16:30
P298	<b>Comparative pharmacology of ofatumumab versus ocrelizumab in humanised-CD20 transgenic mice</b> <i>Speaker:</i> Marc Bigaud, CH	16:30 - 16:30
P299	<b>Relationship of SARS-CoV-2 spike antibody response to lymphocyte subsets and timepoint of ocrelizumab dosing in multiple sclerosis patients</b> <i>Speaker:</i> Eva Oswald, DE	16:30 - 16:30
P300	<b>B-lymphocyte-guided retreatment contributes to establish a good effectiveness/safety profile in MS patients treated with rituximab</b> <i>Speaker:</i> JUAN LUIS CHICO GARCIA, ES	16:30 - 16:30
P301	<b>High dose vitamin D<sub>3</sub> supplementation does not reduce disease activity in relapsing remitting multiple sclerosis in a large randomized controlled trial</b> <i>Speaker:</i> Sandra D. Cassard, US	16:30 - 16:30
P302	<b>Discontinuation of first-line disease-modifying therapy in multiple sclerosis</b> <i>Speaker:</i> Eline M.E. Coerver, NL	16:30 - 16:30
P303	<b>Microparticle-delivered stimulator of interferon genes (STING) agonist suppresses experimental autoimmune encephalomyelitis (EAE) via expansion of FoxP3<sup>+</sup>CD4<sup>+</sup>Tregs</b> <i>Speaker:</i> manal Elzoheiry, US	16:30 - 16:30



P304	<b>Decision-making factors in patient choice to initiate treatment with cladribine: a preliminary baseline analysis from the STATURE study</b> <i>Speaker:</i> Michelle Allan, AU	16:30 - 16:30
P305	<b>The Antwerp experience with patient requests for AHSCT in multiple sclerosis</b> <i>Speaker:</i> Barbara Willekens, BE	16:30 - 16:30
P306	<b>MS patients not treated in french expert centers: explanatory factors and evolution between 2016 and 2019</b> <i>Speaker:</i> Xavier Moisset, FR	16:30 - 16:30
P307	<b>Evobrutinib exerts a therapeutic action on EAE by increasing the peripheral and central classical dendritic cell number and maturation</b> <i>Speaker:</i> Mari Paz Serrano-Regal, ES	16:30 - 16:30
P308	<b>Safety and clinical efficacy outcomes from the Long-term extension study of tolebrutinib in patients with relapsing multiple sclerosis: 2-year results</b> <i>Speaker:</i> Jiwon Oh, CA	16:30 - 16:30
P309	<b>MOG-loaded liposomes as an antigen-specific therapy for multiple sclerosis: preclinical studies</b> <i>Speaker:</i> Herena Eixarch, ES	16:30 - 16:30
P310	<b>The pepducin P2pal-18S attenuates neuroinflammation in experimental autoimmune encephalomyelitis</b> <i>Speaker:</i> Rahil Eftekhari, CA	16:30 - 16:30
P311	<b>Real-world experience with cladribine tablets in an aged ≥50 years cohort</b> <i>Speaker:</i> Donald Negroski, MD, US	16:30 - 16:30
P312	<b>In the absence of inflammation, BTK inhibition interferes with maturation of B cells, but does not affect myeloid phagocytes</b> <i>Speaker:</i> Jacqueline Thode, DE	16:30 - 16:30
P313	<b>Omicron breakthrough disease activity in the Swiss multiple sclerosis cohort study</b> <i>Speaker:</i> Varenka Eppele, CH	16:30 - 16:30
P314	<b>Autologous hematopoietic stem cell transplantation in multiple sclerosis: updating outcomes in the Valencian cohort</b> <i>Speaker:</i> Almudena Boix Lago, ES	16:30 - 16:30
P315	<b>Cyclophosphamide in acute treatment of severe neuroinflammatory disorders</b> <i>Speaker:</i> Allison Osen, US	16:30 - 16:30
P316	<b>Different type and timing of S1P receptor modulator therapy impacts T and B cell response after SARS-CoV2 vaccination</b> <i>Speaker:</i> Katja Akgün, DE	16:30 - 16:30
P317	<b>Siponimod ameliorates metabolic oligodendrocyte injury via the</b>	16:30 - 16:30

	<b>sphingosine-1 phosphate receptor 5</b> <i>Speaker:</i> Markus Kipp, DE	
P318	<b>Siponimod inhibits IFN-gamma-induced microglial activation through a dual central and peripheral mechanism of action</b> <i>Speaker:</i> Leila Husseini, DE	16:30 - 16:30
P319	<b>NVG-291 phase 1 results and phase 2 study design in individuals with relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Daniel Mikol, CA	16:30 - 16:30
P320	<b>The use of magnetisation transfer ratio in demonstrating the neuroprotective effect of phenytoin in patients with acute optic neuritis</b> <i>Speaker:</i> Alessia Bianchi, GB	16:30 - 16:30
P321	<b>CN045 is a novel small molecule lead for remyelinating therapies in multiple sclerosis</b> <i>Speaker:</i> Yan Yang, US	16:30 - 16:30
P322	<b>Ponesimod, mono-selective sphingosine-1-phosphate receptor 1 modulator enhances oligodendrocyte precursor cell differentiation</b> <i>Speaker:</i> Emily Willems, BE	16:30 - 16:30
P323	<b>Genetic modification of hematopoietic cells accelerates myelin repair</b> <i>Speaker:</i> Vanja Tepavcevic, ES	16:30 - 16:30
P324	<b>Improved clinical outcomes in patients treated with natalizumab for at least 11 years - real-world data from a swedish national post-marketing surveillance study (IMSE 1)</b> <i>Speaker:</i> Linda Forsberg, SE	16:30 - 16:30
P325	<b>Siponimod stabilises physical disability scores in people living with secondary progressive multiple sclerosis after 2 years of treatment: analysis from the novartis global managed access program</b> <i>Speaker:</i> Virginia de las Heras, CH	16:30 - 16:30
P326	<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	16:30 - 16:30
P327	<b>Serum GFAP and long-term outcomes in high efficacy versus low efficacy early treatment in multiple sclerosis</b> <i>Speaker:</i> Tanuja Chitnis, US	16:30 - 16:30
P328	<b>Assessing B-cell depletion and disease activity in a french multiple sclerosis cohort treated by long-term anti-CD20 antibody therapy</b> <i>Speaker:</i> Sean Freeman, FR	16:30 - 16:30
P329	<b>DMT Persistence: we've started, when will we stop?</b>	16:30 - 16:30

	<i>Speaker:</i> Joseph Louis Jervis Froud, GB	
P330	<b>Cladribine treatment for highly active relapsing multiple sclerosis: real-world data for years 3 and 4 clinical outcomes</b> <i>Speaker:</i> Mathilda Mandel, IL	16:30 - 16:30
P331	<b>Rates and predictors of serious infections in MS and NMOSD patients treated with anti-CD20 therapy</b> <i>Speaker:</i> Hesham Abboud, US	16:30 - 16:30
P332	<b>Rituximab in paediatric onset multiple sclerosis – a european multicenter experience</b> <i>Speaker:</i> Fredrik Sandesjö, SE	16:30 - 16:30
P333	<b>Long-term effectiveness of extended interval dosing of natalizumab in multiple sclerosis</b> <i>Speaker:</i> Lana Zhovtis Ryerson, US	16:30 - 16:30
P334	<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	16:30 - 16:30
P335	<b>Natalizumab treatment satisfaction in the TONiC-MS study: preliminary results</b> <i>Speaker:</i> Roger Mills, GB	16:30 - 16:30
P336	<b>Longitudinal retinal changes during first line versus high-efficacy therapy for patients with multiple sclerosis</b> <i>Speaker:</i> Yumin Huang-Link, SE	16:30 - 16:30
P337	<b>Natalizumab wearing-off symptoms: effect of extend interval dosing during Sars-CoV-2 pandemic</b> <i>Speaker:</i> Giuseppe Magro, IT	16:30 - 16:30
P338	<b>Rebound of clinical disease activity after fingolimod discontinuation? A nationwide cohort study of patients in Denmark</b> <i>Speaker:</i> Elisabeth Framke, DK	16:30 - 16:30
P339	<b>Consensus recommendations on the use of follow-on disease-modifying treatments for multiple sclerosis</b> <i>Speaker:</i> Wallace J. Brownlee, GB	16:30 - 16:30
P340	<b>Ocrelizumab dosing according to CD19+ cell count monitoring in multiple sclerosis: a tertiary centre audit during the SARS-CoV-2 pandemic</b> <i>Speaker:</i> Federica Giofrè, IT	16:30 - 16:30
P341	<b>Updated post-approval safety of cladribine tablets in the treatment of multiple sclerosis, with particular reference to liver safety</b> <i>Speaker:</i> Gavin Giovannoni, GB	16:30 - 16:30
P342	<b>Multiple sclerosis reactivation after fingolimod discontinuation for planning pregnancy: a monocentric experience</b>	16:30 - 16:30

	<i>Speaker:</i> Lina Jeantin, FR	
P343	<b>Humoral and T- cell response to multiple COVID-19 booster vaccinations in people with MS</b> <i>Speaker:</i> Matthew Upcott MBCh, GB	16:30 - 16:30
P344	<b>Effective humoral and cellular immunity in mRNA-COVID-19 multiple sclerosis vaccinees treated with alemtuzumab</b> <i>Speaker:</i> Anat Achiron, IL	16:30 - 16:30
P345	<b>Humoral immune response to COVID-19 mRNA vaccines in patients with relapsing multiple sclerosis treated with ofatumumab</b> <i>Speaker:</i> Barry A. Hendin, US	16:30 - 16:30
P346	<b>The impact of ocrelizumab on immunoglobulin levels and the risk of infection</b> <i>Speaker:</i> Kyle Smoot, US	16:30 - 16:30
P347	<b>Cellular immune responses to SARS-CoV-2 mRNA vaccination in patients with multiple sclerosis: an Israeli multi-center experience following 3 vaccine doses</b> <i>Speaker:</i> Ron Milo, IL	16:30 - 16:30
P348	<b>S1P1 receptor modulators used as a disease-modifying treatment in multiple sclerosis increase <i>in vitro</i> melanoma cell lines proliferation at a therapeutic dose</b> <i>Speaker:</i> Christine LEBRUN-FRENAY, FR	16:30 - 16:30
P349	<b>Single-dose immunisation with live attenuated vaccines is an effective option before treatment initiation in MS patients</b> <i>Speaker:</i> René Carvajal, ES	16:30 - 16:30
P350	<b>Exploratory magnetic resonance imaging endpoints from NOVA: a randomized controlled study of the efficacy of 6-week dosing of natalizumab vs continued 4-week treatment for multiple sclerosis</b> <i>Speaker:</i> Douglas L Arnold, CA	16:30 - 16:30
P352	<b>Role of serum neurofilament light chain concentration in the prediction of treatment response in multiple sclerosis</b> <i>Speaker:</i> Nahid Moradi, AU	16:30 - 16:30
P353	<b>Expression of peripheral blood IFN-inducible genes predicts treatment outcome in patients with secondary progressive multiple sclerosis treated with IFN-beta-1a</b> <i>Speaker:</i> Michael Gurevich, IL	16:30 - 16:30
P354	<b>Hippocampal Glx in RRMS: a potential therapeutic indicator in fingolimod and injectables</b> <i>Speaker:</i> Jeannette Lechner-Scott, AU <i>Speaker:</i> Jeannette Lechner-Scott, AU	16:30 - 16:30
P355	<b>Bayesian prediction of individualised treatment response in multiple sclerosis</b>	16:30 - 16:30

	<i>Speaker:</i> Sarmad Al-Araji, GB	
P356	<b>Stability of longitudinal DTI metrics in MS with treatment of injectables, fingolimod and dimethyl fumarate</b> <i>Speaker:</i> Abdulaziz Alshehri, AU	16:30 - 16:30
P357	<b>Treating the depression or the disease? Pseudo-trial with the UK MS register</b> <i>Speaker:</i> Jeff Rodgers, GB	16:30 - 16:30
P358	<b>Correlations between early MRI parameters and long-term clinical outcomes in phase 3 and open-label extension studies of ozanimod in relapsing multiple sclerosis</b> <i>Speaker:</i> Douglas L Arnold, CA	16:30 - 16:30
P359	<b>Cognitive functions in persons with multiple sclerosis treated with fingolimod: 2-years follow-up study</b> <i>Speaker:</i> Pinar Yigit, TR	16:30 - 16:30
P360	<b>Carbohydrate restriction improves motor and visual deficits in a mouse model of multiple sclerosis</b> <i>Speaker:</i> Katarzyna Zyla-Jackson, US	16:30 - 16:30
P361	<b>Emulating randomized clinical trials in relapsing-remitting multiple sclerosis with nonrandomized real-world evidence: an application using data from the MSBase registry</b> <i>Speaker:</i> Alessio Signori, IT	16:30 - 16:30
P362	<b>Natalizumab treatment of multiple sclerosis in Denmark — a nationwide study with 14 years of follow-up</b> <i>Speaker:</i> Mathias Due Buron, DK	16:30 - 16:30
P363	<b>Characterizing activity between cycles in patients with multiple sclerosis under cladribine treatment in real word setting: data from Argentina</b> <i>Speaker:</i> Berenice Anabel Silva, AR	16:30 - 16:30
P364	<b>Achieving No Evidence of Disease Activity-3 (NEDA-3) in cladribine and monoclonal antibodies treated multiple sclerosis patients</b> <i>Speaker:</i> Ricardo Alonso, AR	16:30 - 16:30
P365	<b>SISTER – subcutaneous: Non-interventional, observational, prospective, German multicentre, open label study over 12-months for tysabri patient preference – experience from real world – preliminary results of the 1ST interim analysis</b> <i>Speaker:</i> Ralf Gold, DE	16:30 - 16:30
P366	<b>Real-world evidence of anti-CD20 monoclonal antibodies in chilean patients with multiple sclerosis</b> <i>Speaker:</i> Adolfo Del-Canto, CL	16:30 - 16:30
P367	<b>Real-world experience with ocrelizumab in primary Progressive multiple sclerosis: Insights from the MSOCR-P cohort, a MSBase Registry sub-study</b>	16:30 - 16:30

	<i>Speaker:</i> Helmut Butzkueven, AU	
P368	<b>Utilization, safety, and tolerability of ocrelizumab: data from the providence ocrelizumab registry</b> <i>Speaker:</i> Kyle Smoot, US	16:30 - 16:30
P369	<b>The real-world safety and effectiveness of ocrelizumab in patients with primary progressive multiple sclerosis – a confidence study interim analysis</b> <i>Speaker:</i> Mathias Buttmann, DE	16:30 - 16:30
P370	<b>The real-world safety and effectiveness of ocrelizumab in patients with relapsing multiple sclerosis – a confidence study interim analysis</b> <i>Speaker:</i> Martin Weber, DE	16:30 - 16:30
P371	<b>Drivers of therapy switch in relapsing multiple sclerosis: a study from the Italian MS Registry</b> <i>Speaker:</i> Pietro Iaffaldano, IT	16:30 - 16:30
P372	<b>Proof of concept for 2-stage models of heterogeneous treatment effects derived from the real-world MS PATHS research network</b> <i>Speaker:</i> Carrie Hersh, US	16:30 - 16:30
P373	<b>Long-term effectiveness of natalizumab for RRMS: Dutch and global interim results from TYSABRI observational program</b> <i>Speaker:</i> Oliver Gerlach, NL	16:30 - 16:30
P374	<b>Teriflunomide routine clinical practice in patients with relapsing-remitting multiple sclerosis: final results of the TAURUS MS II study</b> <i>Speaker:</i> Georg zu Eulenburg, DE	16:30 - 16:30
P375	<b>Two years efficacy and safety results from real world experience for cladribine tablets in management of relapsing multiple sclerosis in Qatar</b> <i>Speaker:</i> Beatriz Garcia-Cañibano, QA	16:30 - 16:30
P376	<b>Functional connectivity modifications in monoaminergic circuits occur in fatigued MS patients treated with fampridine and amantadine</b> <i>Speaker:</i> Maria Assunta Rocca, IT	16:30 - 16:30
P377	<b>Cognitive improvements in ocrelizumab-treated patients with relapsing-remitting multiple sclerosis: 96-week CASTING study data</b> <i>Speaker:</i> Ralph Benedict, US	16:30 - 16:30
P378	<b>A randomized, controlled trial of low-fat diet for fatigue in multiple sclerosis</b> <i>Speaker:</i> Emma Chase, US	16:30 - 16:30
P379	<b>Abnormal thalamic functional connectivity correlates with cardiorespiratory fitness and physical activity in progressive multiple sclerosis</b>	16:30 - 16:30

	<i>Speaker:</i> Francesco Romanò, IT	
P380	<b>Disease-modifying effect of circuit class therapy in patients with relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Jan Kolář, CZ	16:30 - 16:30
P381	<b>COVID-19 antibody response by vaccine type and lymphocyte count in RMS patients on ponesimod: results from Phase 2 long-term extension study AC-058B202</b> <i>Speaker:</i> Janice Wong, US	16:30 - 16:30
P382	<b>Treatment of acute optic neuritis and multiple sclerosis relapses: an international survey of clinician perspectives and practice</b> <i>Speaker:</i> Emily M. Schorr, US	16:30 - 16:30
P383	<b>Autologous hematopoietic stem cell transplantation for MS. The Dutch experience of patients going abroad</b> <i>Speaker:</i> Ellen P.A. Kramer, NL	16:30 - 16:30
P384	<b>Treatment preferences among health care providers in the United States in selecting disease modifying therapies for multiple sclerosis: a discrete choice experiment study</b> <i>Speaker:</i> Daniel Bandari, US	16:30 - 16:30
P385	<b>IVIG treatment for acute MOGAD attacks- a retrospective multicenter observational study</b> <i>Speaker:</i> Itay Lotan, IL	16:30 - 16:30
P386	<b>Disease activity after short-term interruption of ponesimod versus teriflunomide in relapsing multiple sclerosis patients</b> <i>Speaker:</i> Fred Lublin, US	16:30 - 16:30
P387	<b>COVID-19 infections and vaccinations among patients receiving ozanimod in the daybreak open-label extension trial</b> <i>Speaker:</i> Bruce A. C. Cree, US	16:30 - 16:30
P388	<b>A multi-stakeholder survey on multiple sclerosis multidisciplinary care: The situation in Belgium and lessons for the global community</b> <i>Speaker:</i> Liesbeth Van Hijfte, BE	16:30 - 16:30
P389	<b>Comparing the risk and severity of infusion-related reactions in patients premedicated with cetirizine versus diphenhydramine prior to ocrelizumab infusions (PRECEPT)</b> <i>Speaker:</i> Kyle Smoot, US	16:30 - 16:30
P390	<b>The effect of aerobic training on neuro-specific blood-based biomarkers in people with multiple sclerosis – a secondary analysis of a randomized clinical trial</b> <i>Speaker:</i> Arianne Gravesteijn, NL	16:30 - 16:30
P391	<b>Psychometric properties of the modified reaching performance scale in persons with multiple sclerosis</b> <i>Speaker:</i> Ilse Lamers, BE	16:30 - 16:30

P392	<b>Fear of falling impacts participation in instrumental activities of daily living, leisure activities and social activities in people with multiple sclerosis</b> <i>Speaker:</i> Hanan Khalil, QA	16:30 - 16:30
P393	<b>High-intensity resistance training in fatigued persons with multiple sclerosis - a randomized controlled trial</b> <i>Speaker:</i> Marie Kierkegaard, SE	16:30 - 16:30
P394	<b>Monitoring the progression of the multiple sclerosis: not all the outcome measures are the same over time</b> <i>Speaker:</i> Valeria Prada, IT	16:30 - 16:30
P395	<b>Balance assessment using stabilometric platform in multiple sclerosis: a preliminary FNIRS study</b> <i>Speaker:</i> DAVIDE CATTANEO, IT	16:30 - 16:30
P396	<b>Optimizing sensorimotor function and physical activity for people with multiple sclerosis – a test-retest pilot feasibility study</b> <i>Speaker:</i> Hanne Kristin Fikke, NO	16:30 - 16:30
P397	<b>Predictive ability of the original and short form of the activities-specific balance confidence scale and its individual items for falls in people with multiple sclerosis</b> <i>Speaker:</i> Zuhair Abbas, TR	16:30 - 16:30
P398	<b>Telehealth use during the COVID-19 pandemic, analysis from the Australian multiple sclerosis longitudinal survey</b> <i>Speaker:</i> Yvonne Learmonth, AU	16:30 - 16:30
P399	<b>Under and Over: Findings from a remote upper limb rehabilitation study in people with MS</b> <i>Speaker:</i> Alison Thomson, GB	16:30 - 16:30
P400	<b>The effects of online exercise training on physical activity and functionality in patients with pediatric-onset multiple sclerosis</b> <i>Speaker:</i> Pelin Vural, TR	16:30 - 16:30
P1180	<b>Rapid MS disease progression is histopathologically associated with a new lesions type</b> <i>Poster Presenter:</i> Tanja Kuhlmann, DE	16:30 - 16:30
P1181	<b>Immunogenicity, efficacy and safety of mRNA-COVID-19 vaccines in people with multiple sclerosis</b> <i>Poster Presenter:</i> Marton König, NO	16:30 - 16:30
P1182	<b>Genetic contributions to intrathecal IgG synthesis in multiple sclerosis</b> <i>Poster Presenter:</i> Albert Pukaj, DE	16:30 - 16:30
P1183	<b>Ocrelizumab extended interval dosing compared to standard dosing - a safe alternative with significantly decreased immunoglobulin M deficiency rates</b> <i>Poster Presenter:</i> Torge Rempe, US	16:30 - 16:30



P1184	<b>Myelin-Weighted Imaging with an Ultra-Low Field Portable Magnetic Resonance Imaging Scanner</b> <i>Poster Presenter:</i> Adam V. Dvorak, CA	16:30 - 16:30
P1185	<b>Combining levels of serum neurofilament light chain with CSF glial fibrillary acidic protein improves the prediction of long-term clinical outcomes in multiple sclerosis</b> <i>Poster Presenter:</i> Simon Thebault, CA	16:30 - 16:30
P1186	<b>MRI Characteristics of “Critical” Spinal Cord Demyelinating Lesions Associated with Progressive Motor Impairment</b> <i>Poster Presenter:</i> Mark Keegan, US	16:30 - 16:30
P1187	<b>Identification of multiple sclerosis endophenotypes using high-dimensional blood immune phenotyping and computational biology</b> <i>Poster Presenter:</i> Catharina C. Gross, DE	16:30 - 16:30
P1188	<b>Immune response following mRNA COVID-19 vaccination in patients with multiple sclerosis treated with the Bruton’s tyrosine kinase inhibitor evobrutinib</b> <i>Poster Presenter:</i> Amit Bar-Or, US	16:30 - 16:30
P1189	<b>Phenotypes of disability in aquaporin-4 antibody seropositive neuromyelitis optica spectrum disorders from international clinical, demographic, and magnetic resonance imaging data: a PAMRINO study</b> <i>Poster Presenter:</i> Claudia Chien, DE	16:30 - 16:30
P1190	<b>Plasma circulating microRNAs as new biomarkers to monitor response to dimethylfumarate (DMF) treatment during multiple sclerosis</b> <i>Poster Presenter:</i> Fortunata Carbone, IT	16:30 - 16:30
P1191	<b>Trial of Tauroursodeoxycholic Acid Supplementation in Patients with Progressive MS</b> <i>Poster Presenter:</i> Kimystian Harrison, US	16:30 - 16:30
P1192	<b>ACAPELLA: Real-World Experience with Ocrelizumab: An Observational Study Evaluating Safety in Patients with Relapsing and Progressive MS, Late Breaking Data</b> <i>Poster Presenter:</i> Joshua Katz, US	16:30 - 16:30
P1193	<b>The risk of secondary progressive multiple sclerosis is geographically determined but modifiable</b> <i>Poster Presenter:</i> Sifat Sharmin, AU	16:30 - 16:30
P1194	<b>Robustness of the thalamus against network disruption is related to cognitive status in MS patients</b> <i>Poster Presenter:</i> Julia Rosa Jelgerhuis, NL	16:30 - 16:30
P1195	<b>Distinctive molecular characteristics of <i>HLA-DQA1*05:03</i>, a susceptible HLA allele of neuromyelitis optica spectrum disorders (NMOSD)</b> <i>Poster Presenter:</i> Shohei Beppu, JP	16:30 - 16:30

*Satellite Symposium*

17:30 - 18:30

Room 1

**Satellite Symposium 3**

*Satellite Symposium*

17:30 - 18:30

Room 2

**Satellite Symposium 4**

**Thursday, 27. October 2022**

*Satellite Symposium*  
08:45 - 09:45

Room 1

**Satellite Symposium 5**

*Satellite Symposium*  
08:45 - 09:45

Room 2

**Satellite Symposium 6**

*Therapy*  
10:00 - 11:00

Room 1

**Hot Topic 5: Escalating and de-escalating DMTs**

*Chair:* Maria Trojano, IT

*Chair:* Joep Killestein, NL

**Introduction by chairs**

10:00 - 10:05

O049

**Treating active MS following induction therapies**

10:05 - 10:15

*Speaker:* Gilles Edan, FR

**Long-term stable MS on high-efficacy therapies**

10:15 - 10:25

*Speaker:* Emmanuelle Waubant, US

**Long-term stable MS on platform therapies**

10:25 - 10:35

*Speaker:* Eva Strijbis, NL

**Discussion**

10:35 - 11:00

*Imaging and non-imaging biomarkers*  
10:00 - 11:00

Room 2

**Hot Topic 6: Inclusion of optic nerve lesions in McDonald criteria**

*Chair:* Olivier Outteryck, FR

*Chair:* Wallace J. Brownlee, GB

**Introduction by chairs**

10:00 - 10:05

**Rationale and detection by MRI**

10:05 - 10:15

*Speaker:* Frederik Barkhof, NL

**Clinical implementation**

10:15 - 10:25

*Speaker:* Angela Vidal-Jordana, ES

**Non-MRI assessment of optic nerve lesions**

10:25 - 10:35

*Speaker:* Laura Balcer, US

**Discussion**

10:35 - 11:00

*Therapy*

10:00 - 11:00

Room 3

**Burning Debate: Presymptomatic MS or radiologically-isolated syndrome (RIS) should be actively monitored and treated***Chair:* Barbara Willekens, BE

<b>Introduction by chair</b>	10:00 - 10:05
<b>Yes</b>	10:05 - 10:20
<i>Speaker:</i> Christine Lebrun-Frenay, FR	
<b>No</b>	10:20 - 10:35
<i>Speaker:</i> Ide Smets, NL	
<b>Discussion</b>	10:35 - 11:00

*Therapy*

10:00 - 11:00

Room 4

**Hot Topic 7: Lifestyle interventions***Chair:* Leo Visser, NL*Chair:* Robert Motl, US

	<b>Introduction by chairs</b>	10:00 - 10:05
	<b>Exercise</b>	10:05 - 10:15
	<i>Speaker:</i> Ulrik Dalgas, DK	
	<b>Diet</b>	10:15 - 10:25
	<i>Speaker:</i> Brigit de Jong, NL	
O050	<b>Smoking, stress and sleep</b>	10:25 - 10:35
	<i>Speaker:</i> Christoph Heesen, DE	
	<b>Discussion</b>	10:35 - 11:00

*Clinical*

10:00 - 11:00

Room 5

**Free Communications 3: NMOSD***Chair:* Tania Kümpfel, DE*Chair:* Krzysztof Selmaj, PL

	<b>Introduction by chairs</b>	10:00 - 10:05
O051	<b>Efficacy and safety of ravulizumab in adults with anti-aquaporin-4 antibody-positive neuromyelitis optica spectrum disorder: outcomes from the phase 3 CHAMPION-NMOSD trial</b>	10:05 - 10:12
	<i>Speaker:</i> Sean Pittock, US	
O052	<b>Pregnancy in women with neuromyelitis optica spectrum disorders: recommendations from the french multiple sclerosis society</b>	10:12 - 10:19
	<i>Speaker:</i> Sandra Vukusic, FR	
O053	<b>Seroprevalence of anti-myelin oligodendrocyte glycoprotein antibodies in adults with myelitis</b>	10:19 - 10:26

	<i>Speaker:</i> Ki Hoon Kim, KR	
O054	<b>The absence of antibodies in longitudinally extensive transverse myelitis may predict a favourable prognosis</b> <i>Speaker:</i> Chiara Rocchi, GB	10:26 - 10:33
O055	<b>Increased peripheral inflammatory responses in myelin oligodendrocyte glycoprotein associated disease and aquaporin-4 antibody positive neuromyelitis optica spectrum disorder</b> <i>Speaker:</i> Angelika Bauer, AT	10:33 - 10:40
	<b>Discussion</b>	10:40 - 11:00
<i>Therapy</i>		
10:00 - 11:00		Room 6
<b>Meet the Expert 1: Pregnancy and breastfeeding in MS</b>		
<i>Chair:</i> Rhonda Voskuhl, US		
<i>Chair:</i> Elisabeth G Celius, NO		
<i>Clinical</i>		
10:00 - 11:00		Room 7
<b>Free Communications 4: Diagnostic and prognostic biomarkers</b>		
<i>Chair:</i> Florian Deisenhammer, AT		
<i>Chair:</i> Sergio E. Baranzini, US		
	<b>Introduction by chairs</b>	10:00 - 10:05
O056	<b>Cerebrospinal fluid kappa free light chains for the diagnosis of multiple sclerosis: a systematic review, meta-analysis and consensus statement</b> <i>Speaker:</i> Florian Deisenhammer, AT	10:05 - 10:12
O057	<b>Diagnostic value of inter-eye-difference metrics for optic neuritis in aquaporin-4 antibody seropositive neuromyelitis optica</b> <i>Speaker:</i> Frederike Cosima Oertel, DE	10:12 - 10:19
O058	<b>Serum and CSF biomarkers associations with retinal integrity in CIS patients</b> <i>Speaker:</i> Àngela Vidal-Jordana, ES	10:19 - 10:26
O059	<b>Plasma glial fibrillary acidic protein levels correlate with unfavourable imaging measures in people with Radiologically Isolated Syndrome</b> <i>Speaker:</i> Raphael Schneider, CA	10:26 - 10:33
O060	<b>Complement activation predicts disease severity in multiple sclerosis</b> <i>Speaker:</i> Johanna Oechtering, CH	10:33 - 10:40
	<b>Discussion</b>	10:40 - 11:00

*Educational Sessions*

10:00 - 11:00

Room 8

**Educational Session 10 (RIMS): Updates in MS rehabilitation: speech and swallowing, bladder and bowel management and sexual health***Chair:* Turhan Kahraman, TR*Chair:* Leena Maria Heikkola, FI

	<b>Introduction by chairs</b>	10:00 - 10:05
O061	<b>Bladder and bowel management: rehabilitation approaches</b> <i>Speaker:</i> Turhan Kahraman, TR	10:05 - 10:20
O062	<b>Sexual health and psychological wellbeing</b> <i>Speaker:</i> Jana Pöttgen, DE	10:20 - 10:35
O063	<b>Optimizing speech and swallowing</b> <i>Speaker:</i> Leena Maria Heikkola, FI	10:35 - 10:50
	<b>Discussion</b>	10:50 - 11:00

*Break*

11:00 - 11:30

Room 1

**Coffee Break***Clinical*

11:30 - 13:00

Room 1

**Scientific Session 5: Progressive MS***Chair:* Kathy Smith, US*Chair:* Jan Meilof, NL

	<b>Introduction by chairs</b>	11:30 - 11:35
O064	<b>Outcome measures in progressive MS trials</b> <i>Speaker:</i> Ruth Ann Marrie, CA	11:35 - 11:50
	<b>Clinical trial design in progressive MS</b> <i>Speaker:</i> Maria Pia Sormani, IT	11:50 - 12:05
	<b>Platform presentations of related original papers</b>	12:05 - 12:05
O065	<b>Influence of disease modifying therapies on expanded disability status scale scores trajectories in treated and not-treated patients with secondary Progressive multiple sclerosis - analysis from nine registries</b> <i>Speaker:</i> Luigi Pontieri, DK	12:05 - 12:12
O066	<b>The demographics, clinical course and pathology of late-onset MS</b> <i>Speaker:</i> Sarah Knowles, GB	12:12 - 12:19
O067	<b>Compartmental inflammation in progressive multiple sclerosis</b> <i>Speaker:</i> Anthony Chomyk, US	12:19 - 12:26
O068	<b>Genetic analysis of multiple sclerosis severity identifies a novel locus and implicates CNS resilience as a major determinant of</b>	12:26 - 12:33

	<b>outcome</b>	
	<i>Speaker:</i> Adil Harroud, US	
	<b>Discussion</b>	12:33 - 13:00
<i>Clinical</i>		
11:30 - 13:00		Room 2
<b>Scientific Session 6: Treating children with MS ('Rogier Hintzen session')</b>		
<i>Chair:</i> Evangeline Wassmer, GB		
<i>Chair:</i> Yael Hacoen, GB		
	<b>Introduction by chairs</b>	11:30 - 11:35
	<b>Management of the clinical consequences of a child with MS</b>	11:35 - 11:50
	<i>Speaker:</i> E. Ann Yeh, CA	
	<b>Why Immunomodulatory treatment is different in children with MS</b>	11:50 - 12:05
	<i>Speaker:</i> Kevin Rostasy, DE	
	<b>Platform presentations of related original papers</b>	12:05 - 12:05
O069	<b>Long-term efficacy and safety of fingolimod in paediatric multiple sclerosis patients: analysis of PARADIGMS study up to 6 years of treatment</b>	12:05 - 12:12
	<i>Speaker:</i> Kumaran Deiva, FR	
O070	<b>Real-world effectiveness of switching treatment after initial platform injectable disease-modifying therapies in pediatric multiple sclerosis in the US</b>	12:12 - 12:19
	<i>Speaker:</i> Aaron Abrams, US	
O071	<b>Progression independent of relapse activity can occur in paediatric-onset multiple sclerosis and can be prevented by disease modifying drugs</b>	12:19 - 12:26
	<i>Speaker:</i> Emilio Portaccio, IT	
O072	<b>Prognostic relevance of quantitative and longitudinal MOG-ABS testing in patients with MOGAD</b>	12:26 - 12:33
	<i>Speaker:</i> Matteo Gastaldi, IT	
	<b>Discussion</b>	12:33 - 13:00
<i>Clinical</i>		
11:30 - 13:00		Room 3
<b>Scientific Session 7: Advanced mobility assessment</b>		
<i>Chair:</i> Mary Galea, AU		
<i>Chair:</i> Johanna Jonsdottir, IT		
	<b>Introduction by chairs</b>	11:30 - 11:35
O073	<b>Wearable technology in MS</b>	11:35 - 11:50
	<i>Speaker:</i> Andrea Tacchino, IT	
	<b>3D gait analysis</b>	11:50 - 12:05

	<i>Speaker:</i> Vincent de Groot, NL	
	<b>Platform presentations of related original papers</b>	12:05 - 12:05
O074	<b>Tapping speed in smartphone is useful for detection of progressive multiple sclerosis</b> <i>Speaker:</i> JUAN LUIS CHICO GARCIA, ES	12:05 - 12:12
O075	<b>Using actigraphy to track clinical disability progression in multiple sclerosis: Baseline analysis of the HEAL-MS study</b> <i>Speaker:</i> Nicole Bou Rjeily, US	12:12 - 12:19
O076	<b>Cardiorespiratory fitness protects against declines in gait quality over two years in people with multiple sclerosis</b> <i>Speaker:</i> Syamala Buragadda, CA	12:19 - 12:26
O077	<b>Correlation between gait parameters for stand phase and push-off with gait distance in people with MS <i>How can the use of wearable technology contribute in a physiotherapeutic setting?</i></b> <i>Speaker:</i> Thomas Klyve, NO	12:26 - 12:33
	<b>Discussion</b>	12:33 - 13:00
<i>Pathogenesis</i> 11:30 - 13:00		
		Room 4
	<b>Scientific Session 8: Immune cell trafficking into the CNS</b>	
	<i>Chair:</i> Britta Engelhardt, CH	
	<i>Chair:</i> Jack Van Horssen, NL	
	<b>Introduction by chairs</b>	11:30 - 11:35
O078	<b>Immune cell trafficking across brain barriers</b> <i>Speaker:</i> Alexandre Prat, CA	11:35 - 11:50
	<b>Functional characterisation of the dural sinuses as a neuroimmune interface</b> <i>Speaker:</i> Jonathan Kipnis, US	11:50 - 12:05
	<b>Platform presentations of related original papers</b>	12:05 - 12:05
O079	<b>T cells are poised to invade the CNS through a distinct transcriptional cytotoxic program in MS</b> <i>Speaker:</i> Fabienne van Puijfelik, NL	12:05 - 12:12
O080	<b>Blood-borne immune cells in the central nervous system: high-dimensional single cell characterization of regional heterogeneity in multiple sclerosis</b> <i>Speaker:</i> Rose-Marie Rébillard, CA	12:12 - 12:19
O081	<b>Osteopontin as brain T<sub>RM</sub>-cell hallmark relates to compartmentalization and MS-pathology</b> <i>Speaker:</i> Jeen Engelenburg, NL	12:19 - 12:26
O082	<b>Mass cytometry blood immunophenotyping of RRMS patients at diagnosis helps in deciphering subtle changes in myeloid</b>	12:26 - 12:33



**compartment associated to disease evolution***Speaker:* Stephane Rodriguez, FR**Discussion**

12:33 - 13:00

*Therapy*

11:30 - 13:00

Room 5

**Scientific Session RIMS 1: Aging and MS: impact of age on MS rehabilitation***Chair:* Letizia Leocani, IT*Chair:* Piet Leopold Eelen, BE**Introduction by chairs**

11:30 - 11:35

**The impact of age in relation to disabilities and key symptoms in MS and other neurological diseases**

11:35 - 11:50

*Speaker:* Lars G Hvid, DK**Rehabilitation in MS across the life span**

11:50 - 12:05

*Speaker:* Marcia Finlayson, CA**Platform presentations**

12:05 - 12:05

O083

**From the patient's perspective: trajectories of physical worsening over 55 years in multiple sclerosis**

12:05 - 12:12

*Speaker:* Annalaura Lerede, GB

O084

**Rate of disability progression assessed by EDSS, orchestrated by age at MS onset**

12:12 - 12:19

*Speaker:* Leszek Stawiarz, SE

O085

**Motoric cognitive risk syndrome in MS: prevalence and relationship with disability, disease duration, perceived fatigue, and fear of falling**

12:19 - 12:26

*Speaker:* Alon Kalron, IL

O086

**Identifying multiple sclerosis fallers by neuromuscular function**

12:26 - 12:33

*Speaker:* Laurits Taul-Madsen, DK**Discussion**

12:33 - 13:00

*Therapy*

11:30 - 12:30

Room 6

**Meet the Expert 2: Choosing therapy - similar compounds, same effect?***Chair:* Ludwig Kappos, CH*Chair:* Stephen Hauser, US*Imaging and non-imaging biomarkers*

11:30 - 12:30

Room 7

**Young Scientific Investigators' Session 2: Long-term outcomes and safety***Chair:* Carmen Tur, ES*Chair:* Christian Philipp Kamm, CH**Introduction by chairs**

11:30 - 11:35

O087	<b>Iron Rim Lesions in Multiple Sclerosis: Insights from 7T MRI cohort with longitudinal clinical follow-up</b> <i>Speaker:</i> Amjad Altokhis, GB	11:35 - 11:42
O088	<b>Retinal layer thickness as a biomarker of future disability accumulation in newly diagnosed relapsing multiple sclerosis</b> <i>Speaker:</i> Gabriel Bsteh, AT	11:42 - 11:49
O089	<b>High efficacy disease modifying therapies increase the risk of cervical abnormalities in women with multiple sclerosis</b> <i>Speaker:</i> Francesca Bridge, AU	11:49 - 11:56
O090	<b>Natalizumab improves motor fatigue by restoring abnormal brain networks connectivity and sensorimotor network activation in people with multiple sclerosis</b> <i>Speaker:</i> Marco Mancuso, IT	11:56 - 12:03
O091	<b>Long-term effectiveness and safety of disease modifying therapies after natalizumab-associated progressive multifocal leukoencephalopathy</b> <i>Speaker:</i> Jason Blau, DE	12:03 - 12:10
	<b>Discussion</b>	12:10 - 12:30

*Educational Sessions*

11:30 - 12:30

Room 8

**Educational Session 11: A "Surface-in" gradient of brain and spinal cord damage in MS - pathophysiology and clinical relevance***Chair:* Bruno Stankoff, FR*Chair:* Roberta Magliozzi, IT

	<b>Introduction by chairs</b>	11:30 - 11:35
O092	<b>Regionalisation of tissue damage on MRI</b> <i>Speaker:</i> Declan Chard, GB	11:35 - 11:50
	<b>Mechanisms of the surface-in gradient: insight from molecular imaging</b> <i>Speaker:</i> Bruno Stankoff, FR	11:50 - 12:05
	<b>Biological substrate of the surface-in gradient : lessons from pathology</b> <i>Speaker:</i> Roberta Magliozzi, IT	12:05 - 12:20
	<b>Discussion</b>	12:20 - 12:30

*Break*

13:00 - 13:45

Room 1

**Lunch Break**

*Clinical*

13:00 - 13:45

ePoster Theatre 1

**ePoster Tour 1 - Clinical***Chair:* Annette Langer-Gould, US

P480	<b>Assisted reproductive technology treatment and risk of multiple sclerosis – a danish cohort study</b> <i>Poster Presenter:</i> Melinda Magyari, DK	13:00 - 13:05
P075	<b>Interferon- or peginterferon-beta 1a exposure during pregnancy in women with multiple sclerosis: outcomes on child development</b> <i>Poster Presenter:</i> Kerstin Hellwig, DE	13:05 - 13:10
P475	<b>Use of pregnancy-related healthcare in women with multiple sclerosis</b> <i>Poster Presenter:</i> Marie Mainguy, FR	13:10 - 13:15
P421	<b>Pregnancy and post-partum in patients with myelin-oligodendrocyte glycoprotein antibody-associated disease</b> <i>Poster Presenter:</i> Xavier Ayrignac, FR	13:15 - 13:20
P081	<b>Multiple sclerosis disease activity and disability following discontinuation of fingolimod for pregnancy</b> <i>Poster Presenter:</i> Marianne Tokic, DE	13:20 - 13:25
P468	<b>Patterns and risks for cognitive impairment in multiple sclerosis: a UK biobank study</b> <i>Poster Presenter:</i> Victoria L Whitford, GB	13:25 - 13:30
P455	<b>Clinical and radiological concordance in sibling pairs with multiple sclerosis</b> <i>Poster Presenter:</i> Alexander Balcerac, FR	13:30 - 13:35
P449	<b>Identification of novel CSF measures of disease activity and chronic progressive biology in MS: results of the Ocrelizumab Biomarker Outcome Evaluation Study (OBOE): a randomised, open-label clinical trial</b> <i>Poster Presenter:</i> Amit Bar-Or, US	13:35 - 13:40
P111	<b>Evaluation of paramagnetic rim lesions as a marker of disability</b> <i>Poster Presenter:</i> Riccardo Nistri, IT	13:40 - 13:45

*Pathogenesis*

13:00 - 13:45

ePoster Theatre 2

**ePoster Tour 2 - Pathogenesis***Chair:* Ellen Iacobaeus, SE

P173	<b>Effect of in silico depletion of lymphocyte subpopulations on the immune gene regulatory networks in chronic active MS lesions</b> <i>Poster Presenter:</i> Edoardo Pedrini, IT	13:00 - 13:05
P545	<b>Peripheral blood immune markers associated with immunosenescence in multiple sclerosis and healthy controls</b>	13:05 - 13:10

	<i>Poster Presenter:</i> Catherine Larochelle, CA	
P541	<b>Single nuclei RNA sequencing stratifies multiple sclerosis patients into three distinct white matter glia responses</b> <i>Poster Presenter:</i> Daniela Calini, CH	13:10 - 13:15
P146	<b>Cellular immune profiling reveals effector memory CD8<sup>+</sup>CCR5<sup>+</sup> T-cell effect of ocrelizumab in early relapsing-remitting multiple sclerosis</b> <i>Poster Presenter:</i> Alexandra Garcia, FR	13:15 - 13:20
P568	<b>Gene-environment interactions increase the risk of pediatric-onset multiple sclerosis associated with household chemical exposures</b> <i>Poster Presenter:</i> Zahra Nasr, US	13:20 - 13:25
P529	<b>Microglial and iron heterogeneity in progressive multiple sclerosis</b> <i>Poster Presenter:</i> Kaitlyn Cyncynatus, US	13:25 - 13:30
P557	<b>More efficient complement activation by anti-AQP4 compared to anti-MOG antibodies</b> <i>Poster Presenter:</i> Magdalena Lerch, AT	13:30 - 13:35
P578	<b>Using high-resolution quantitative MRI to discriminate demyelination in postmortem multiple sclerosis spinal cord tissue</b> <i>Speaker:</i> Daniel Ontaneda, US	13:35 - 13:40
P128	<b>Multimodal bioinformatic analysis of clinical, neuropathology and molecular profiling of progressive MS</b> <i>Poster Presenter:</i> Roberta Magliozzi, IT	13:40 - 13:45

*Imaging and non-imaging biomarkers*  
13:00 - 13:45

ePoster Theatre 3

### **ePoster Tour 3 - Imaging and non-imaging biomarkers**

*Chair:* Cristina Granziera, CH

P650	<b>Serum neurofilament light chain levels at disease onset and high efficacy treatments to predict disability progression among patients with a CIS</b> <i>Poster Presenter:</i> Enric Monreal, ES	13:00 - 13:05
P639	<b>Retinal ganglion cell loss is associated with future disability worsening in early relapsing remitting multiple sclerosis</b> <i>Poster Presenter:</i> Josephine Wauschkuhn, DE	13:05 - 13:10
P187	<b>Myelin water fraction of the corpus callosum is a robust measure of remyelination in a double-blind placebo-controlled clinical trial</b> <i>Poster Presenter:</i> Christian Cordano, US	13:10 - 13:15
P232	<b>Thalamic myelin and neurite content is reduced in progressive multiple sclerosis and relates to disability and cognitive impairment</b>	13:15 - 13:20

	<i>Poster Presenter:</i> Alessandro Cagol, CH	
P630	<b>Improved assessment of leptomeningeal contrast enhancement via 3-Tesla 3D real inversion recovery MRI in multiple sclerosis</b> <i>Poster Presenter:</i> Serhat V. Okar, US	13:20 - 13:25
P188	<b>Effect of ibudilast on slowly-evolving lesions in progressive multiple sclerosis</b> <i>Poster Presenter:</i> Kunio Nakamura, US	13:25 - 13:30
P189	<b>Investigating normal appearing white matter using intensity scaled T1-weighted magnetic resonance images in multiple sclerosis</b> <i>Poster Presenter:</i> Tun Wiltgen, DE	13:30 - 13:35
P265	<b>Serum glial fibrillary acidic protein is associated with afferent visual system damage in neuromyelitis optica spectrum disorder only in eyes without prior optic neuritis</b> <i>Poster Presenter:</i> Patrick Schindler, DE	13:35 - 13:40
P269	<b>Using serum metabolomic signatures to classify multiple sclerosis progression using machine learning models</b> <i>Poster Presenter:</i> Alexandra Elizabeth Oppong, GB	13:40 - 13:45
<i>Therapy</i> 13:00 - 13:45		
		ePoster Theatre 4
<b>ePoster Tour 4- Therapy</b>		
<i>Chair:</i> Thomas Berger, AT		
P317	<b>Siponimod ameliorates metabolic oligodendrocyte injury via the sphingosine-1 phosphate receptor 5</b> <i>Poster Presenter:</i> Markus Kipp, DE	13:00 - 13:05
P284	<b>Intravenous immunoglobulin treatment in pregnancy and the post-partum period reduces relapse rates in women with multiple sclerosis</b> <i>Poster Presenter:</i> Shay Menascu, IL	13:05 - 13:10
P346	<b>The impact of ocrelizumab on immunoglobulin levels and the risk of infection</b> <i>Poster Presenter:</i> Kyle Smoot, US	13:10 - 13:15
P784	<b>Cladribine protects SH-SY5Y neuron-like cells from oxidative stress conditions in vitro</b> <i>Poster Presenter:</i> Herena Eixarch, ES	13:15 - 13:20
P285	<b>Treatment-naïve patients with early-stage relapsing-remitting multiple sclerosis showed low disease activity after 2-year ocrelizumab therapy, with no new safety signals; the Phase IIIb ENSEMBLE study</b> <i>Poster Presenter:</i> Hans-Peter Hartung, DE	13:20 - 13:25
P385	<b>IVIG treatment for acute MOGAD attacks- a retrospective multicenter observational study</b> <i>Poster Presenter:</i> Itay Lotan, IL	13:25 - 13:30

P723	<b>Long-term efficacy and safety of ocrelizumab in treatment-naïve patients with early relapsing multiple sclerosis: 7-year data from the OPERA open-label extension trials</b> <i>Poster Presenter:</i> Joao Jose Cerqueira, PT	13:30 - 13:35
P730	<b>Early use of high efficacy therapies in pediatric forms of relapsing-remitting multiple sclerosis: a real-life observational study</b> <i>Poster Presenter:</i> Augustin Moreau, FR	13:35 - 13:40
P355	<b>Bayesian prediction of individualised treatment response in multiple sclerosis</b> <i>Poster Presenter:</i> Sarmad Al-Araji, GB	13:40 - 13:45
<i>Satellite Symposium</i> 13:45 - 14:45		Room 1
<b>Satellite Symposium 7</b>		
<i>Satellite Symposium</i> 13:45 - 14:45		Room 2
<b>Satellite Symposium 8</b>		
<i>Imaging and non-imaging biomarkers</i> 15:00 - 16:30		Room 1
<b>Scientific Session 9 MRI: Updated MAGNIMS-NAIMS-CMSC guidelines</b> <i>Chair:</i> Daniel Ontaneda, US <i>Chair:</i> Maria Assunta Rocca, IT		
	<b>Introduction by chairs</b>	15:00 - 15:05
	<b>Use in diagnosis, prognosis and safety monitoring</b> <i>Speaker:</i> Alex Rovira, ES	15:05 - 15:20
	<b>Dissemination and implementation strategy</b> <i>Speaker:</i> David Li, CA	15:20 - 15:35
	<b>Platform presentations of related original papers</b>	15:35 - 15:35
O093	<b>Paramagnetic rim lesions predict the development of clinical MS in radiologically isolated syndrome: preliminary results from a prospective cohort study</b> <i>Speaker:</i> Timothy Reynold Lim, CA	15:35 - 15:42
O094	<b>The smoldering component of white matter lesions contributes to disease progression in multiple sclerosis: a longitudinal 18 F-DPA-714 TSPO PET study</b> <i>Speaker:</i> Mariem Hamzaoui, FR	15:42 - 15:49
O095	<b>A multicentric investigation of the diagnostic accuracy of cortical lesions and central vein sign in multiple sclerosis</b> <i>Speaker:</i> Alessandro Cagol, CH	15:49 - 15:56
O096	<b>Tumefactive demyelination in MOG antibody-associated disease versus other demyelinating disorders</b>	15:56 - 16:03

*Speaker:* Laura Cacciaguerra, US

**Discussion**

16:03 - 16:30

*Pathogenesis*

15:00 - 16:30

Room 2

**Scientific Session 10: B and T cells**

*Chair:* Joost Smolders, NL

*Chair:* Frauke Zipp, DE

**Introduction by chairs**

15:00 - 15:05

O097

**B cells and CNS inflammation in an animal model of Multiple Sclerosis**

15:05 - 15:20

*Speaker:* Jennifer Gommerman, CA

**Novel insights in circulating B and T cells in MS**

15:20 - 15:35

*Speaker:* Klaus Dornmair, DE

**Platform presentations of related original papers**

15:35 - 15:35

O098

**The two-pore-domain potassium channel K<sub>2p</sub>18.1 mediates translation of T cell receptor signals during thymic T<sub>reg</sub> development**

15:35 - 15:42

*Speaker:* Stefanie Bock, DE

O099

**Proteogenomic immune signatures delineate the landscape of pediatric acquired demyelinating syndromes**

15:42 - 15:49

*Speaker:* Diego Espinoza, US

O100

**Interleukin-10 secreting B cells regulate myeloid phagocytes and microglia, ameliorating chronic central nervous system inflammation**

15:49 - 15:56

*Speaker:* Silke Häusser-Kinzel, DE

O101

**CNS infection wakens a dormant autoimmune B cell response**

15:56 - 16:03

*Speaker:* Hyein Kim, CH

**Discussion**

16:03 - 16:30

*Clinical*

15:00 - 16:30

Room 3

**Scientific Session 11: Quality of life**

*Chair:* Iris-Katharina Penner, CH

*Chair:* Karin van der Hiele, NL

**Introduction by chairs**

15:00 - 15:05

O102

**Treating psychological factors**

15:05 - 15:20

*Speaker:* Victoria Leavitt, US

O103

**Mechanisms underlying fatigue**

15:20 - 15:35

*Speaker:* Federica Picariello, GB

**Platform presentations of related original papers**

15:35 - 15:35

O104	<b>Short-term change in disability and processing speed, but not relapse rate, predicts health related quality of life five and ten years later</b> <i>Speaker:</i> Lars Forsberg, SE	15:35 - 15:42
O105	<b>Surprisingly large differences in the long-term effects of multidisciplinary neurorehabilitation depending on rehabilitation goals: Casting light into the "Black box" of rehabilitation - The Danish MS Hospitals Rehabilitation Study</b> <i>Speaker:</i> Finn Boesen, DK	15:42 - 15:49
O106	<b>Multiple sclerosis and quality of life: multi-dimensional approach to identify holistic factors influencing quality of life amongst persons with multiple sclerosis</b> <i>Speaker:</i> Laura Rice, US	15:49 - 15:56
O107	<b>Structural and functional magnetic resonance imaging correlates of fatigue and dual-task performance in progressive multiple sclerosis</b> <i>Speaker:</i> Paolo Preziosa, IT	15:56 - 16:03
	<b>Discussion</b>	16:03 - 16:30

*Pathogenesis*

15:00 - 16:30

Room 4

**Scientific Session 12: The earliest events in MS***Chair:* Jeroen Geurts, NL*Chair:* Luke Healy, CA

	<b>Introduction by chairs</b>	15:00 - 15:05
	<b>Earliest inflammatory changes</b> <i>Speaker:</i> Richard Reynolds, GB	15:05 - 15:20
O108	<b>MS as an inside-out disease – insights using spectral pathology</b> <i>Speaker:</i> Peter Stys, CA	15:20 - 15:35
	<b>Platform presentations of related original papers</b>	15:35 - 15:35
O109	<b>B cells exhibit marked epigenetic age acceleration in multiple sclerosis</b> <i>Speaker:</i> Vicki Maltby, AU	15:35 - 15:42
O110	<b>Serological response to the Epstein-Barr virus peptides and the risk for MS</b> <i>Speaker:</i> Alberto Ascherio, US	15:42 - 15:49
O111	<b>Increase in Epstein Barr virus serologies precedes neuroaxonal damage in pre-symptomatic multiple sclerosis</b> <i>Speaker:</i> Daniel Jons, SE	15:49 - 15:56
O112	<b>Disease-specific autoantibody biomarkers of multiple sclerosis are present years before disease onset</b> <i>Speaker:</i> Gavin Sowa, US	15:56 - 16:03



	<b>Discussion</b>	16:03 - 16:30
<i>Therapy</i> 15:00 - 16:30		
		Room 5
	<b>Scientific Session RIMS 2: Innovations in MS: Technology-supported rehabilitation</b>	
	<i>Chair:</i> Giampaolo Brichetto, IT	
	<i>Chair:</i> Lousin Moumdjian, BE	
	<b>Introduction by chairs</b>	15:00 - 15:05
O113	<a href="#">Innovations in technology for rehabilitation</a> <i>Speaker:</i> Peter Feys, BE	15:05 - 15:20
	<b>Internet-based technology use in daily life</b> <i>Speaker:</i> Yael Goverover, US	15:20 - 15:35
O114	<b>Home-based EXergames To impRove cognitivE function in Multiple Sclerosis: a multicentre, randomised, sham-controlled, single-blind, parallel arm study (the EXTREMUS study)</b> <i>Speaker:</i> Luca Prosperini, IT	15:35 - 15:42
O115	<b>Online intervention to reduce depressive symptoms in multiple sclerosis: an international multicenter randomized controlled phase III trial</b> <i>Speaker:</i> Stefan M. Gold, DE	15:42 - 15:49
O116	<b>Effects of telerehabilitation-based pelvic floor muscle training on urinary incontinence, sexual dysfunction, and quality of life in people with multiple sclerosis: a randomised, controlled, assessor-blinded trial</b> <i>Speaker:</i> Ipek Yavas, TR	15:49 - 15:56
O117	<b>Post-discharge telephone counseling doubles the long-term beneficial effects of inpatient multidisciplinary rehabilitation – The Danish MS Hospitals Rehabilitation Study</b> <i>Speaker:</i> Michael Nørgaard, DK	15:56 - 16:03
	<b>Discussion</b>	16:03 - 16:30
<i>Therapy</i> 15:00 - 16:00		
		Room 6
	<b>Free Communications 5: Treatment</b>	
	<i>Chair:</i> Gabriel Bsteh, AT	
	<i>Chair:</i> Fred Lublin, US	
	<b>Introduction by chairs</b>	15:00 - 15:05
O118	<b>Chronic active multiple sclerosis lesions are poorly responsive to anti-CD20 antibody treatment</b> <i>Speaker:</i> Pietro Maggi, BE	15:05 - 15:12
O119	<b>Prediction of response in relapsing-remitting MS patients initiating oral DMTs</b> <i>Speaker:</i> Agustín Pappolla, ES	15:12 - 15:19

O120	<b>Assessment of dose-dependency of anti-inflammatory and neuroprotective efficacy variables and biomarkers for vidofludimus calcium in emphasis: a randomized, placebo-controlled phase 2 trial in relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Robert J. Fox, US	15:19 - 15:26
O121	<b>Therapeutic choices and disease activity after the end of Cladribine treatment: an Italian multicenter study (CladStop)</b> <i>Speaker:</i> Irene Schiavetti, IT	15:26 - 15:33
O122	<b>Primary analysis of ProTECT-MS, a randomised, placebo-controlled, phase 2 study of temelimab for the prevention of neurodegeneration in rituximab-treated patients with relapsing multiple sclerosis</b> <i>Speaker:</i> Fredrik Piehl, SE	15:33 - 15:40
	<b>Discussion</b>	15:40 - 16:00

*Imaging and non-imaging biomarkers*  
15:00 - 16:00

Room 7

### **Young Scientific Investigators' Session 3: Cellular profiling**

*Chair:* Marie D'hooghe, BE

*Chair:* Bob van Oosten, NL

	<b>Introduction by chairs</b>	15:00 - 15:05
O123	<b>Circulating intermediate monocytes: a novel prognostic marker in multiple sclerosis</b> <i>Speaker:</i> Karine Thai, CA	15:05 - 15:12
O124	<b>Biological roles of myeloid cell subsets during CNS inflammation</b> <i>Speaker:</i> Navid Manouchehri, US	15:12 - 15:19
O125	<b>Regulatory T cells ameliorate CNS neuroinflammation by targeting CNS myeloid cells</b> <i>Speaker:</i> Miriam Schillner, DE	15:19 - 15:26
O126	<b>The aging MS brain displays a distinct distribution of microglial subtypes when compared to Alzheimer brains</b> <i>Speaker:</i> Victoria S. Marshe, US	15:26 - 15:33
O127	<b>Cellular and molecular profiling of iPSC-derived neurons from twin pairs discordant for MS reveals potential MS-susceptibility pathways</b> <i>Speaker:</i> Svetlana Bezukladova, IT	15:33 - 15:40
	<b>Discussion</b>	15:40 - 16:00

*Educational Sessions*  
15:00 - 16:00

Room 8

### **Educational Session 12: Cognitive impairment in MS - an update**

*Chair:* Laura Hancock, US

*Chair:* Bruno Brochet, FR

	<b>Introduction by chairs</b>	15:00 - 15:05
	<b>Diagnosis and diagnostic challenges</b> <i>Speaker:</i> Laura Hancock, US	15:05 - 15:20
	<b>Underlying Mechanisms</b> <i>Speaker:</i> Menno M. Schoonheim, NL	15:20 - 15:35
O128	<b>Treatment: what is new?</b> <i>Speaker:</i> Bruno Brochet, FR	15:35 - 15:50
	<b>Discussion</b>	15:50 - 16:00
<i>Break</i> 16:30 - 17:00		
	<b>Coffee Break</b>	Room 1
<i>Poster Session</i> 17:00 - 19:00		
	<b>Poster Session 2</b>	Room 1
P401	<b>Neurological features of CTLA4 insufficiency: a nationwide study of a poorly understood neuroinflammatory genetic disorder</b> <i>Speaker:</i> Xavier Ayrignac, FR	17:00 - 17:00
P402	<b>Is the clinical onset of demyelinating CNS disease after COVID-19 vaccination a <i>denovo</i> disease or the clinical manifestation of a preexisting condition?</b> <i>Speaker:</i> Jonathan A. Gernert, DE	17:00 - 17:00
P403	<b>Patterns of disease exacerbation and outcomes in neurosarcoidosis</b> <i>Speaker:</i> Maria Reyes-Mantilla, US	17:00 - 17:00
P404	<b>COVID-19 associated myelitis: early insights from a multi-center study</b> <i>Speaker:</i> Mario Habek, HR	17:00 - 17:00
P405	<b>Predictors of early serologic diagnosis of aquaporin-4 IgG positive NMOSD</b> <i>Speaker:</i> Dalia L. Rotstein, CA	17:00 - 17:00
P406	<b>Is C5a a marker of inflammatory activity during clinical remission in patients with neuromyelitis optica spectrum disorders AQP4+</b> <i>Speaker:</i> Andres Villa, AR	17:00 - 17:00
P407	<b>Cancer prevalence in a neuromyelitis optica spectrum disorder cohort</b> <i>Speaker:</i> Maria Reyes-Mantilla, US	17:00 - 17:00
P408	<b>Baseline characteristics of initial patients in the CorEvitas SPHERES registry for NMOSD</b>	17:00 - 17:00

	<i>Speaker:</i> Shervin Gholizadeh, US	
P409	<b>Clinical outcomes and prognostic factors in patients with optic neuritis related to NMOSD and MOGAD from Latin America in distinct ethnic groups</b> <i>Speaker:</i> Edgar Carnero Contentti, AR	17:00 - 17:00
P410	<b>Population-based mortality data of the Danish nationwide AQP4 antibody-seropositive NMOSD cohort</b> <i>Speaker:</i> Viktoria Papp, DK	17:00 - 17:00
P411	<b>Inebilizumab reduces attack risk independent of low affinity IgG Fc region receptor III-a gene polymorphisms in neuromyelitis optica spectrum disorder</b> <i>Speaker:</i> Orhan Aktas, DE	17:00 - 17:00
P412	<b>Understanding treatment decisions in neuromyelitis optica spectrum disorder: a global clinical record review with patient interviews</b> <i>Speaker:</i> Ju-Hong Min, KR	17:00 - 17:00
P413	<b>Longitudinally extensive transverse myelitis in neuromyelitis optica and beyond: an observational study of the etiologic spectrum and distinguishing factors</b> <i>Speaker:</i> Miguel Mas-Serrano, ES	17:00 - 17:00
P414	<b>Determinants of visual impairment in aquaporin-4 antibody associated neuromyelitis optica spectrum disorders compared to MOG-antibody associated disorders and multiple sclerosis</b> <i>Speaker:</i> Hanna Gwendolyn Zimmermann, DE	17:00 - 17:00
P415	<b>Spatial association between gene expression and brain damage in neuromyelitis optica spectrum disorders</b> <i>Speaker:</i> Laura Cacciaguerra, IT	17:00 - 17:00
P416	<b>Leigh disease; brainstem and spinal myelitis with a diagnosis of mitochondrial DNA mutations, mimicking mimicking neuromyelitis optica spectrum disorder (NMOSD)</b> <i>Speaker:</i> Nee Na Kim, GB	17:00 - 17:00
P417	<b>Characterisation of disease severity and stability in neuromyelitis optica spectrum disorder: a global clinical record review with patient interviews</b> <i>Speaker:</i> Marco Capobianco, IT	17:00 - 17:00
P418	<b>Activity impairment and support needs in neuromyelitis optica spectrum disorder: a patient's perspective</b> <i>Speaker:</i> Benjamin Osborne, US	17:00 - 17:00
P419	<b>Safety and efficacy of Inebilizumab in AQP4+ NMOSD participants with history of immunosuppression treatment prior to N-MOMentum study</b> <i>Speaker:</i> Friedemann Paul, DE	17:00 - 17:00
P420	<b>Clinical and radiologic characteristics of seropositive neuromyelitis optica spectrum disorder in a Turkish cohort</b>	17:00 - 17:00

	<i>Speaker:</i> Furkan Asan, TR	
P421	<b>Pregnancy and post-partum in patients with myelin-oligodendrocyte glycoprotein antibody-associated disease</b> <i>Speaker:</i> Xavier Ayrignac, FR	17:00 - 17:00
P422	<b>Quantitative MRI measures of MOGAD compared to MS, NMOSD and healthy controls</b> <i>Speaker:</i> Amy Kunchok, US	17:00 - 17:00
P423	<b>Patterns of visual pathway neurodegeneration and demyelination in MOG-antibody associated disease, multiple sclerosis and neuromyelitis optica spectrum disorders</b> <i>Speaker:</i> Gilberto Solorza Buenrostro, DE	17:00 - 17:00
P424	<b>Seasonal distribution of relapses in MOG antibody associated disease (MOGAD)</b> <i>Speaker:</i> Mónica Santos, PT	17:00 - 17:00
P425	<b>Exploring the patient pathway from first symptoms to diagnosis: results from an international survey of patients with myelin oligodendrocyte glycoprotein antibody-associated disease (MOGAD)</b> <i>Speaker:</i> Jonathan D Santoro, US	17:00 - 17:00
P426	<b>A retrospective investigation of MOG-IgG titers in relapse and disability prediction in adult and pediatric myelin oligodendrocyte glycoprotein antibody-associated disease patients</b> <i>Speaker:</i> Jamie McDonald, US	17:00 - 17:00
P427	<b>Impaired brain growth in myelin oligodendrocyte glycoprotein antibody - associated acute disseminated encephalomyelitis</b> <i>Speaker:</i> Frederik Bartels, DE	17:00 - 17:00
P428	<b>MOGAD with concurrent malignancy</b> <i>Speaker:</i> Young Nam Kwon, KR	17:00 - 17:00
P429	<b>Clinical profile of MOGAD patients binding to the P42S MOG variant</b> <i>Speaker:</i> Aseel El Hajj, FR	17:00 - 17:00
P430	<b>Cognitive impairment in MOGAD is associated with a history of ADEM-like episodes and cortical atrophy</b> <i>Speaker:</i> Ann-Kathrin Kogel, DE	17:00 - 17:00
P431	<b>Predictors of suicidal ideation in people with multiple sclerosis.</b> <i>Speaker:</i> Benjamin N Cassidy, CA	17:00 - 17:00
P432	<b>Cognitive profile of persons with newly diagnosed multiple sclerosis</b> <i>Speaker:</i> Sinem Ozcelik, TR	17:00 - 17:00
P433	<b>The impact of biological sex and cognitive reserve on cognition in multiple sclerosis</b> <i>Speaker:</i> Manuela Altieri, IT	17:00 - 17:00

P434	<b>Functional and structural MRI changes associated with cognitive worsening in multiple sclerosis: a 3-year longitudinal study</b> <i>Speaker:</i> Matteo Azzimonti, IT	17:00 - 17:00
P435	<b>Time-varying functional connectivity of the hippocampus is associated with cognitive performance in multiple sclerosis patients</b> <i>Speaker:</i> Maria Assunta Rocca, IT	17:00 - 17:00
P436	<b>Probing mental fatigue in multiple sclerosis: brain activation patterns during cognitive tasks and their relationship with state and trait fatigue</b> <i>Speaker:</i> Bruna Baldasso, CA	17:00 - 17:00
P437	<b>Prediction of cognitive impairment in multiple sclerosis: 10- and 16-year follow-up studies</b> <i>Speaker:</i> Jiri Motyl, CZ	17:00 - 17:00
P438	<b>The relationship between cognitive impairment and stigma in people with multiple sclerosis</b> <i>Speaker:</i> Ozge Sagici, TR	17:00 - 17:00
P439	<b>The seasonal fluctuation of fatigue in multiple sclerosis</b> <i>Speaker:</i> Matthias Grothe, DE	17:00 - 17:00
P440	<b>Factors influencing fatigue in persons with multiple sclerosis: contribution of psychological and magnetic resonance imaging assessment</b> <i>Speaker:</i> Stefanie Hechenberger, AT	17:00 - 17:00
P441	<b>Hippocampal microstructural integrity and speed of information processing in multiple sclerosis</b> <i>Speaker:</i> Damiano Mistri, IT	17:00 - 17:00
P442	<b>Seizure as a presenting symptom in children with neuroinflammatory disorders</b> <i>Speaker:</i> Hadas Meirson, IL	17:00 - 17:00
P443	<b>Stable incidence and sex-ratio in the paediatric onset multiple sclerosis population for over a decade in Ontario, Canada (2003-2019)</b> <i>Speaker:</i> Fardowsa L A Yusuf, CA	17:00 - 17:00
P444	<b>Ocrelizumab dose selection for treatment of relapsing-remitting multiple sclerosis in children and adolescents: Preliminary pharmacokinetic, safety and efficacy results from the OPERETTA 1 study</b> <i>Speaker:</i> Massimiliano Valeriani, IT	17:00 - 17:00
P445	<b>Natalizumab rapidly and strongly suppresses inflammatory disease activity in pediatric-onset multiple sclerosis</b> <i>Speaker:</i> Marta Gaggiola, IT	17:00 - 17:00
P446	<b>Progression independent of relapse activity is the main</b>	17:00 - 17:00

	<b>determinant of disability accumulation in relapsing-onset multiple sclerosis patients</b> <i>Speaker:</i> Emilio Portaccio, IT	
P447	<b>Determine whether relapse associated worsening can be separated from PIRA using the MSIS-29 PRO in the UKMSR</b> <i>Speaker:</i> Alessia Curcio Rubertini, GB	17:00 - 17:00
P448	<b>Amasia study: real-world data on MS therapy optimization with siponimod</b> <i>Speaker:</i> Olaf Hoffmann, DE	17:00 - 17:00
P449	<b>Identification of novel CSF measures of disease activity and chronic progressive biology in MS: results of the Ocrelizumab Biomarker Outcome Evaluation Study (OBOE): a randomised, open-label clinical trial</b> <i>Speaker:</i> Amit Bar-Or, US	17:00 - 17:00
P450	<b>The late onset of emotional distress in people with progressive multiple sclerosis during the COVID-19 pandemic: longitudinal findings from the CogEx study</b> <i>Speaker:</i> Anthony Feinstein, CA	17:00 - 17:00
P451	<b>Neuregulin-1 treatment facilitates neurogenesis and cognitive recovery in chronic cuprizone mouse model of multiple sclerosis</b> <i>Speaker:</i> Shiva Nemati, CA	17:00 - 17:00
P452	<b>Analysis of long-term disability trajectories in patients with primary progressive multiple sclerosis</b> <i>Speaker:</i> Ricardo Alonso, AR	17:00 - 17:00
P453	<b>Prevalence of motor and cognitive fatigability in progressive multiple sclerosis and related factors</b> <i>Speaker:</i> Cintia Ramari, BE	17:00 - 17:00
P454	<b>Characterization of the familial multiple sclerosis population in Israel</b> <i>Speaker:</i> Netta Kugelman, IL	17:00 - 17:00
P455	<b>Clinical and radiological concordance in sibling pairs with multiple sclerosis</b> <i>Speaker:</i> Alexander Balcerac, FR	17:00 - 17:00
P456	<b>Deciphering multiple sclerosis disability progression in the elderly: a multicenter cohort study</b> <i>Speaker:</i> Jean-Christophe OUALLET, FR	17:00 - 17:00
P457	<b>Impact of COVID 19 vaccination or infection on disease activity in radiologically isolated syndrome cohort: the VaxiRIS study</b> <i>Speaker:</i> Mikael Cohen, FR	17:00 - 17:00
P458	<b>Self-reported disabilities and health-related quality of life in persons with multiple sclerosis in the Netherlands: 10-year prospective web-based study in a population-based real-life</b>	17:00 - 17:00

	<b>cohort</b> <i>Speaker:</i> Peter Joseph Jongen, NL	
P459	<b>Relapse associated worsening and progression independent of relapse according to age in multiple sclerosis</b> <i>Speaker:</i> Pietro Iaffaldano, IT	17:00 - 17:00
P460	<b>Central demyelination due to biologic agents in rheumatic diseases</b> <i>Speaker:</i> Doruk Arslan, TR	17:00 - 17:00
P461	<b>Patterns of age and sex distribution by a population-based incidence and prevalence study of multiple sclerosis in the province of Palermo</b> <i>Speaker:</i> Paolo Ragonese, IT	17:00 - 17:00
P462	<b>Examination of racial disparities in multiple sclerosis clinical care</b> <i>Speaker:</i> Kimystian Harrison, US	17:00 - 17:00
P463	<b>Risk of stroke in multiple sclerosis and neuromyelitis optic spectrum disorder: a nationwide cohort study in South Korea</b> <i>Speaker:</i> Ju-Hong Min, KR	17:00 - 17:00
P464	<b>Rising prevalence of multiple sclerosis in Israel</b> <i>Speaker:</i> Daniel Golan, IL	17:00 - 17:00
P465	<b>Ensemble genetic machine learning identifies multiple sclerosis genetic loci associated with future worsening of disability</b> <i>Speaker:</i> Valery Fuh-Ngwa, AU	17:00 - 17:00
P466	<b>Influence of socio-economic status on excess mortality of multiple sclerosis</b> <i>Speaker:</i> Gilles Defer, FR	17:00 - 17:00
P467	<b>Prevalence of chronic comorbidities in people with Multiple Sclerosis: descriptive study based on administrative data in Tuscany (Central Italy)</b> <i>Speaker:</i> Daiana Bezzini, IT	17:00 - 17:00
P468	<b>Patterns and risks for cognitive impairment in multiple sclerosis: a UK biobank study</b> <i>Speaker:</i> Victoria L Whitford, GB	17:00 - 17:00
P469	<b>Frequency and risk factors of fingolimod rebound – a retrospective population-based study</b> <i>Speaker:</i> Anna Maunula, FI	17:00 - 17:00
P470	<b>Is benign multiple sclerosis truly benign? A socioeconomic investigative nationwide cohort study</b> <i>Speaker:</i> Malthe Faurschou Wandall-Holm, DK	17:00 - 17:00
P471	<b>Untangling the effect of relapse on disability worsening</b> <i>Speaker:</i> Sahl Khalid Bedri, SE	17:00 - 17:00
P473	<b>Ponesimod compared with teriflunomide in female patients of</b>	17:00 - 17:00



	<b>childbearing age with relapsing multiple sclerosis: Results of the phase 3 OPTIMUM study</b> <i>Speaker:</i> Robyn R Jones, US	
P474	<b>Could follicle reserve disclose cognition and physical disability in MS?</b> <i>Speaker:</i> Bilge Piri Cinar, TR	17:00 - 17:00
P475	<b>Use of pregnancy-related healthcare in women with multiple sclerosis</b> <i>Speaker:</i> Marie Mainguy, FR	17:00 - 17:00
P476	<b>Comparison of anti-CD20 therapies versus other disease modifying therapies on postpartum disease activity in patients with multiple sclerosis</b> <i>Speaker:</i> Michlene Passeri, US	17:00 - 17:00
P477	<b>Brain MRI activity during the year before pregnancy can predict long term clinical worsening in females with multiple sclerosis</b> <i>Speaker:</i> Omri Zveik, IL	17:00 - 17:00
P478	<b>Interferon beta exposure during pregnancy and breastfeeding: Impact on birth outcome and child development – results from the post-authorisation safety study PRIMA</b> <i>Speaker:</i> Juliane Klehmet, DE	17:00 - 17:00
P479	<b>Trends in the use of disease-modifying therapies in pre-pregnant, pregnant, and postpartum women with multiple sclerosis in the United States: 2016-2021</b> <i>Speaker:</i> Edith Graham, US	17:00 - 17:00
P480	<b>Assisted reproductive technology treatment and risk of multiple sclerosis – a danish cohort study</b> <i>Speaker:</i> Melinda Magyar, DK	17:00 - 17:00
P481	<b>Immune cell alterations during pregnancy in patients with multiple sclerosis</b> <i>Speaker:</i> Simon Faissner, DE	17:00 - 17:00
P482	<b>Disease activity in multiple sclerosis patients after assisted reproductive technology</b> <i>Speaker:</i> Lucía Romero-Pinel, ES	17:00 - 17:00
P483	<b>B cell subset dynamic during pregnancy and early post-partum in women with multiple sclerosis?????</b> <i>Speaker:</i> Dorian Landi, IT	17:00 - 17:00
P484	<b>Sleep apnea and periodic limb movements are highly prevalent in patients with multiple sclerosis</b> <i>Speaker:</i> Miklos Palotai, US	17:00 - 17:00
P485	<b>Impaired visual discrimination and object recognition in RRMS patients despite intact visual pathway</b> <i>Speaker:</i> Erik Ellwardt, DE	17:00 - 17:00
P486	<b>Isolated genital numbness in multiple sclerosis: urogenital</b>	17:00 - 17:00

	<b>profile and neurophysiological correlates</b> <i>Speaker:</i> Sarah Wright, GB	
P487	<b>MSReactor is an acceptable long-term web-based cognitive monitoring platform for patients with multiple sclerosis</b> <i>Speaker:</i> Johnson Ja, AU	17:00 - 17:00
P488	<b>Oligoclonal M bands distinguish two MS populations based on neurofilament light chain levels in patients without inflammatory activity</b> <i>Speaker:</i> Jessica Castillo, ES	17:00 - 17:00
P489	<b>Scoring methods of cognitive fatigability in people with multiple sclerosis????</b> <i>Speaker:</i> Niels Peeters, BE	17:00 - 17:00
P490	<b>The relationship between swallowing function, pulmonary functions and respiratory muscle strength in patients with multiple sclerosis</b> <i>Speaker:</i> Julide Kesebir, TR	17:00 - 17:00
P491	<b>Remote web-based assessment of cognition, mood and fatigue in people with multiple sclerosis</b> <i>Speaker:</i> Emily Thorp, GB	17:00 - 17:00
P492	<b>Learning from pseudo-labels: deep networks improve classical longitudinal brain volume change estimation for patients with MS</b> <i>Speaker:</i> Geng Zhan, AU	17:00 - 17:00
P493	<b>Neurostatus-eEDSS results in high consistency of expanded disability status scale assessments: experience from 13 clinical trials</b> <i>Speaker:</i> Nuria Cerdá Fuertes, CH	17:00 - 17:00
P494	<b>Multiple sclerosis and ambulation: the relationships of the 25 foot timed walk to quantitative gait parameters during preferred walking speed and dual task walking</b> <i>Speaker:</i> Olivia Kaczmarek, US	17:00 - 17:00
P495	<b>Multiple sclerosis, multi-domain computerized cognitive testing and employment: real world value of validated cognitive testing</b> <i>Speaker:</i> Mark Gudesblatt, US	17:00 - 17:00
P496	<b>LUN-MS: validity, reliability and acceptability of a new questionnaire to identify the unmet needs of people with multiple sclerosis</b> <i>Speaker:</i> Amin M. Abu Baker, GB	17:00 - 17:00
P497	<b>Extraction of lesion activity information in multiple sclerosis from unformatted MRI reports using advanced natural language processing techniques</b> <i>Speaker:</i> qiang fang, CA	17:00 - 17:00
P498	<b>No evidence of disease activity can predict long-term disease</b>	17:00 - 17:00

	<b>course</b> <i>Speaker:</i> Cecilia Simonsen, NO	
P499	<b>Motion capture of the Manual dexterity test to categorize hand function in multiple sclerosis</b> <i>Speaker:</i> Marisa McGinley, US	17:00 - 17:00
P500	<b>Self perception of cognitive impairment is not influenced by disease related variables and educational level</b> <i>Speaker:</i> Valeria Bergamaschi, IT	17:00 - 17:00
P501	<b>Plantar flexion strength on a force plate in people with multiple sclerosis</b> <i>Speaker:</i> Katrin Trentzsch, DE	17:00 - 17:00
P502	<b>Patient-reported outcome parameters support estimating and predicting progression independent of relapse activity in people with multiple sclerosis</b> <i>Speaker:</i> Ahmed Abdelhak, US	17:00 - 17:00
P503	<b>Therapeutic adherence and quality of care of MS patients during COVID-19 pandemic: an italian multicenter patient-centered survey (COVIMPSAT)</b> <i>Speaker:</i> Mario Risi, IT	17:00 - 17:00
P504	<b>Validation of the MS-IADL-Q to measure cognitive functioning in daily life</b> <i>Speaker:</i> Maureen van Dam, NL	17:00 - 17:00
P505	<b>Safety of a third SARS-CoV-2 mRNA vaccine dose in people with multiple sclerosis</b> <i>Speaker:</i> Tilde Harridsleff Rasmussen, NO	17:00 - 17:00
P506	<b>Multiple sclerosis and ambulation: a comparison of the relationship of traditional outcome measures and quantitative gait analysis as they both relate to perception of balance and falling in people with multiple sclerosis</b> <i>Speaker:</i> Olivia Kaczmarek, US	17:00 - 17:00
P507	<b>Experiences of post-traumatic stress disorder in people living with multiple sclerosis</b> <i>Speaker:</i> Heather Mah, GB	17:00 - 17:00
P508	<b>A provisional multidimensional computerized adaptive testing version of the MSQOL-54: Individualizing health-related quality of life measures in multiple sclerosis</b> <i>Speaker:</i> Andrea Giordano, IT	17:00 - 17:00
P509	<b>Predicting expanded disability status scale (EDSS) Using patient reported outcomes (PROs)</b> <i>Speaker:</i> Lars Forsberg, SE	17:00 - 17:00
P510	<b>Multiple sclerosis and ambulation: the relationships of the neuro QoL lower extremity function patient reported outcome to quantitative gait parameters during preferred walking speed and</b>	17:00 - 17:00

	<b>dual task walking</b> <i>Speaker:</i> Olivia Kaczmarek, US	
P511	<b>The relation between age, symptoms onset and physical disability: a prospective registry study</b> <i>Speaker:</i> Annalaura Lerede, GB	17:00 - 17:00
P512	<b>Neuroimaging correlates of patient-reported outcomes in multiple sclerosis</b> <i>Speaker:</i> Taylor R. Wicks, US	17:00 - 17:00
P513	<b>Participation and barriers for work in individuals with multiple sclerosis in Nordland county (Norway): a survey study</b> <i>Speaker:</i> Ellen Christin Arntzen, NO	17:00 - 17:00
P514	<b>Sustained decrease of income in multiple sclerosis: a new possible disability outcome measure of disease progression</b> <i>Speaker:</i> Athanasia E. Christakou, SE	17:00 - 17:00
P515	<b>Long-term outcome after COVID-19 infection in multiple sclerosis: a matched-controlled study in a nation-wide Austrian registry</b> <i>Speaker:</i> Gabriel Bsteh, AT	17:00 - 17:00
P516	<b>Cardiovascular comorbidities and cardiovascular risk assessment in Aquaporin-4 and MOG antibody disorders</b> <i>Speaker:</i> Mónica Santos, PT	17:00 - 17:00
P517	<b>Characterizing the relationship between white matter lesions and depression in patients with multiple sclerosis?</b> <i>Speaker:</i> Erica Baller, US	17:00 - 17:00
P518	<b>Clinical course of multiple sclerosis and patient experiences during breast cancer treatment</b> <i>Speaker:</i> Alyssa Nylander, US	17:00 - 17:00
P519	<b>Smoking and health-related quality of life in patients with multiple sclerosis from Latin America</b> <i>Speaker:</i> Pablo A. Lopez, AR	17:00 - 17:00
P520	<b>Enhanced detection of JCPyV DNA based on extracellular vesicle-associated cell-free DNA</b> <i>Speaker:</i> Finja Schweitzer, DE	17:00 - 17:00
P521	<b>Views from an international multiple sclerosis patient community on the future of their clinical care</b> <i>Speaker:</i> Robert Sloan, CA	17:00 - 17:00
P522	<b>Remote passive monitoring in people living with progressive multiple sclerosis during the COVID-19 pandemic shows a measurable reduction in daily activity</b> <i>Speaker:</i> Maxime Usdin, US	17:00 - 17:00
P523	<b>Geography and a changing technology landscape: analysing coverage of German multiple sclerosis care networks and digital health technology adoption in multiple sclerosis trials</b>	17:00 - 17:00

	<i>Speaker:</i> Lars Masanneck, DE	
P524	<b>Group counselling consultations: the way forward?</b> <i>Speaker:</i> Jonathan Hawken, GB	17:00 - 17:00
P525	<b>Neuronal loss in the thalamus and pons correlates with disease severity: Interim analysis of a large digital pathology study</b> <i>Speaker:</i> Benjamin COOZE, GB	17:00 - 17:00
P526	<b>The prevalence and topography of spinal cord demyelination and inflammatory activity in multiple sclerosis</b> <i>Speaker:</i> Alex D. Waldman, GB	17:00 - 17:00
P527	<b>Ultrastructural alterations in the normal appearing white matter in MS correlate with activated microglia and lymphocytes</b> <i>Speaker:</i> Aletta van den Bosch, NL	17:00 - 17:00
P528	<b>Microfibril-associated protein 4 (MFAP4) Is a marker for disease activity and extracellular matrix remodeling in the active disease stage of inflammatory demyelinating diseases</b> <i>Speaker:</i> Sara Samadzadeh, DK	17:00 - 17:00
P529	<b>Microglial and iron heterogeneity in progressive multiple sclerosis</b> <i>Speaker:</i> Kaitlyn Cyncynatus, US	17:00 - 17:00
P530	<b>Lipocalin 2 regulates blood-brain barrier integrity under inflammatory conditions</b> <i>Speaker:</i> Natalie Gasterich, DE	17:00 - 17:00
P531	<b>Accelerated cellular senescence in progressive multiple sclerosis</b> <i>Speaker:</i> Dimitrios Papadopoulos, CY	17:00 - 17:00
P532	<b>Interferon-gamma restricts the immune responses in neuromyelitis optica disease: a novel animal model</b> <i>Speaker:</i> Gabriel Arellano, US	17:00 - 17:00
P533	<b>Identifying the molecular underpinnings of blood-brain barrier dysfunction in multiple sclerosis</b> <i>Speaker:</i> Sarah Guimbal, CH	17:00 - 17:00
P534	<b>Patient-derived 3D brainspheres as a platform to model chronic neuroinflammation and interrogate its molecular mechanisms in multiple sclerosis</b> <i>Speaker:</i> Francesca Fagiani, IT	17:00 - 17:00
P535	<b>Pharmacological microglia depletion followed by repopulation ameliorates recurrent cuprizone-induced demyelination</b> <i>Speaker:</i> Tiago Medeiros-Furquim, NL	17:00 - 17:00
P536	<b>Single-cell transcriptomics identifies brain inflammatory networks in experimental autoimmune encephalomyelitis (EAE)</b> <i>Speaker:</i> Olivier Tastet, CA	17:00 - 17:00
P537	<b>Co-culture of iPSC-derived microglia and iPSC-derived</b>	17:00 - 17:00

	<b>astrocytes: modeling multiple sclerosis white and grey matter lesion environments</b> <i>Speaker:</i> Thecla A. van Wageningen, NL	
P538	<b>Functional epigenetic networks are associated with multiple sclerosis</b> <i>Speaker:</i> Alexandre Xavier, AU	17:00 - 17:00
P540	<b>A genetic association study on iron metabolism genes highlights Hypoxia-Inducible Factor-1 alfa as a potential driver of chronic active inflammation in progressive MS</b> <i>Speaker:</i> Antonino Giordano, IT	17:00 - 17:00
P541	<b>Single nuclei RNA sequencing stratifies multiple sclerosis patients into three distinct white matter glia responses</b> <i>Speaker:</i> Daniela Calini, CH	17:00 - 17:00
P542	<b>MicroRNAs can affect differentiation in an oligodendrocyte cell culture model</b> <i>Speaker:</i> Océane Perdaens, BE	17:00 - 17:00
P543	<b>Single-cell transcriptomic and epigenetic landscape of iPSCs, neural progenitors and oligodendrocytes from monozygotic twin discordant for Multiple Sclerosis</b> <i>Speaker:</i> Valentina Murta, IT	17:00 - 17:00
P544	<b>Genetic susceptibility to multiple sclerosis is associated with earlier onset and increased disease severity</b> <i>Speaker:</i> Ingrid Kockum, SE	17:00 - 17:00
P545	<b>Peripheral blood immune markers associated with immunosenescence in multiple sclerosis and healthy controls</b> <i>Speaker:</i> Catherine Larochelle, CA	17:00 - 17:00
P546	<b>Upregulated complement receptors correlate with Fc gamma receptor 3A-positive natural killer cells and natural killer-T cells in neuromyelitis optica spectrum disorder</b> <i>Speaker:</i> Shuhei Nishiyama, US	17:00 - 17:00
P547	<b>Aggressive multiple sclerosis shows an increase in a peripheral cytotoxic CD8+ T cell subset through single-cell RNA sequencing</b> <i>Speaker:</i> Sita Shah, FR	17:00 - 17:00
P548	<b>Mucosal associated invariant T (MAIT) cells mediate the crosstalk between the gut and the brain in people with multiple sclerosis (MS)</b> <i>Speaker:</i> Laura Ghezzi, US	17:00 - 17:00
P549	<b>NDP-MSH improves the blood-brain barrier integrity in experimental autoimmune encephalomyelitis by inducing claudin-5 and ZO-1 expression</b> <i>Speaker:</i> Eyad Alsaedi, DE	17:00 - 17:00
P550	<b>MAIT cells from multiple sclerosis patients are modulated by</b>	17:00 - 17:00

	<b>the microbiome</b> <i>Speaker:</i> Jorge Correale, AR	
P551	<b>Chemerin correlates with MS progression parameters and affects intracellular metabolism in human microglia and macrophages</b> <i>Speaker:</i> Merel Rijnsburger, NL	17:00 - 17:00
P552	<b>Investigating Bruton Tyrosine Kinase Inhibition in human and mouse myeloid cells to further elucidate cell-specific and disease relevant mechanisms in multiple sclerosis</b> <i>Speaker:</i> Rochelle Benoit, CA	17:00 - 17:00
P553	<b>SARS-CoV-2 vaccine-induced immune responses and breakthrough infections in people with multiple sclerosis treated with ocrelizumab (OCR)</b> <i>Speaker:</i> Amit Bar-Or, US	17:00 - 17:00
P554	<b>FOXP3+ regulatory T cells use heparanase to access IL-2 bound within extracellular matrix to suppress neuroinflammation</b> <i>Speaker:</i> Hedwich F. Kuipers, CA	17:00 - 17:00
P555	<b>Understanding B cell migration after personalized dosing of ocrelizumab in multiple sclerosis patients</b> <i>Speaker:</i> Carla Rodriguez-Mogeda, NL	17:00 - 17:00
P556	<b>GB7208 is a CNS-penetrant BTK inhibitor demonstrating potent activity on pathogenic pathways implicated in multiple sclerosis</b> <i>Speaker:</i> Laura Carter, US	17:00 - 17:00
P557	<b>More efficient complement activation by anti-AQP4 compared to anti-MOG antibodies</b> <i>Speaker:</i> Magdalena Lerch, AT	17:00 - 17:00
P558	<b>SARS-COV2 exposure rates and serological response of people living with MS</b> <i>Speaker:</i> Elisa Longinetti, SE	17:00 - 17:00
P559	<b>Transcriptomic profile of age-related changes in the peripheral immune system in experimental autoimmune encephalomyelitis</b> <i>Speaker:</i> María Dema, ES	17:00 - 17:00
P560	<b>COVID-19 course and outcome after three mRNA vaccine doses in MS patients treated with high efficacy DMTs</b> <i>Speaker:</i> Antonio Gallo, IT	17:00 - 17:00
P561	<b>Risk and severity of SARS-CoV-2 reinfection among patients with multiple sclerosis vs. the general population: a population-based study</b> <i>Speaker:</i> Mahdi Barzegar, IR	17:00 - 17:00
P562	<b>SARS-CoV-2 vaccination and COVID-19 infections in people with multiple sclerosis treated with ocrelizumab in the prospective, multicenter, noninterventional MuSicalE and CONFIDENCE studies</b>	17:00 - 17:00

	<i>Speaker:</i> Maria Trojano, IT	
P564	<b>Spike antibody seroconversion and breadth following SARS-CoV-2 vaccination in Australian people with multiple sclerosis</b> <i>Speaker:</i> Fabienne Brilot, AU	17:00 - 17:00
P565	<b>Multiple sclerosis and molecular mimicry between NS5 Zika virus epitope and PLP autoantigens</b> <i>Speaker:</i> Laise Carolina França, BR	17:00 - 17:00
P566	<b>Differential methylation mediates significant proportions of environmental and lifestyle factors' associations with MS risk: results from the Ausimmune case-control study</b> <i>Speaker:</i> Steve Simpson-Yap, AU	17:00 - 17:00
P567	<b>Longitudinal trajectories of diet quality and associations with clinical progression over 7.5 years in an international sample of people with MS</b> <i>Speaker:</i> Steve Simpson-Yap, AU	17:00 - 17:00
P568	<b>Gene-environment interactions increase the risk of pediatric-onset multiple sclerosis associated with household chemical exposures</b> <i>Speaker:</i> Zahra Nasr, US	17:00 - 17:00
P569	<b>Smoking and multiple sclerosis risk in blacks: a nested case-control study</b> <i>Speaker:</i> Vinicius Schoeps, US	17:00 - 17:00
P570	<b>Association between abdominal obesity, adipokines and disease severity in patients with multiple sclerosis</b> <i>Speaker:</i> Marthe Danielsen, DK	17:00 - 17:00
P571	<b>Long-term exposure to ambient air pollution is associated with increased neuronal injury in people with multiple sclerosis</b> <i>Speaker:</i> Eleni Vasileiou, US	17:00 - 17:00
P572	<b>Expansion of chronic active multiple sclerosis lesions is linked to the dysregulation of cholesterol metabolism</b> <i>Speaker:</i> Kristen Hawkins, GB	17:00 - 17:00
P573	<b>The role of dual immunoglobulin domain containing cell adhesion molecule (DICAM) Expressing myeloid cells in multiple sclerosis lesion formation and disease progression</b> <i>Speaker:</i> Oumayma SELMI, CA	17:00 - 17:00
P574	<b>Myelin dynamics in the optic nerve during development</b> <i>Speaker:</i> Alexandra Beaudry-Richard, US	17:00 - 17:00
P575	<b>Hyaluronan synthesis and catabolism as therapeutic targets for cognitive disturbances in multiple sclerosis</b> <i>Speaker:</i> Larry Sherman, US	17:00 - 17:00
P576	<b>Spatial gene expression profiling of multiple sclerosis lesion cores and rims predict lesion evolution</b> <i>Speaker:</i> Marion H. C. Wijering, NL	17:00 - 17:00



P577	<b>Impact of age in the central nervous system pathogenesis of the in vivo model of multiple sclerosis</b> <i>Speaker:</i> Ana Rita Ribeiro, PT	17:00 - 17:00
P578	<b>Using high-resolution quantitative MRI to discriminate demyelination in postmortem multiple sclerosis spinal cord tissue</b>	17:00 - 17:00
P579	<b>Myelinated axon degeneration associated with periventricular T2 hyperintensities</b> <i>Speaker:</i> Vikas Singh, US	17:00 - 17:00
P580	<b>Transcranial direct current stimulation applied to prevent optic nerve damage and to promote remyelination in the experimental autoimmune encephalomyelitis mouse model</b> <i>Speaker:</i> Silvia Marena, IT	17:00 - 17:00
P581	<b>Low serum n-acetylglucosamine levels are associated with serum neurofilament light chain increase after 12 months</b> <i>Speaker:</i> Alexander Ulrich Brandt, US	17:00 - 17:00
P582	<b>Characterization of galectin-1 and galectin-4 expression levels in Sera of multiple sclerosis patients and their effect on oligodendrocyte precursor cells differentiation and inflammation</b> <i>Speaker:</i> Maya Golan, IL	17:00 - 17:00
P583	<b>Neuregulin-1 enhances oligodendrocyte maturation and remyelination through microglia dependent mechanisms</b> <i>Speaker:</i> Seyyed Mohyeddin Ziaee, CA	17:00 - 17:00
P584	<b>Targeting GPR183/oxysterol signalling in remyelination</b> <i>Speaker:</i> Aleksandra Rutkowska, PL	17:00 - 17:00
P585	<b>Characteristics of the diffusion-based brain connectivity among multiple sclerosis phenotypes</b> <i>Speaker:</i> Eloy Martinez-Heras, ES	17:00 - 17:00
P586	<b>The predictive value of the multilayer graph properties on clinical status in patients with multiple sclerosis.</b> <i>Speaker:</i> Eloy Martinez-Heras, ES	17:00 - 17:00
P587	<b>Regional altered diffusion in lesional and normal-appearing cortex is linked to cognitive impairment in multiple sclerosis</b> <i>Speaker:</i> Eva A. Krijnen, NL	17:00 - 17:00
P588	<b>Cortical lesions in functional networks are related to cortical atrophy, but only in normal-appearing grey matter</b> <i>Speaker:</i> Eva A. Krijnen, NL	17:00 - 17:00
P589	<b>Multiparametric quantitative MRI for Brain microstructural tissue characterization in multiple sclerosis</b> <i>Speaker:</i> Henri Trang, DE	17:00 - 17:00
P590	<b>Using spinal cord atrophy as a progressive marker without dedicated scanning</b>	17:00 - 17:00

	<i>Speaker:</i> Blake E. Dewey, US	
P591	<b>Microglial activation in multiple sclerosis patients treated with current high-efficacy disease modifying treatments: Individualized [F-18]PBR06-PET analysis</b> <i>Speaker:</i> Tarun Singhal, US	17:00 - 17:00
P592	<b>Subpial lesions with juxta-cortical rims of increased susceptibility in multiple sclerosis: characteristics and clinical relevance</b> <i>Speaker:</i> Riccardo Galbusera, CH	17:00 - 17:00
P593	<b>Impact of natalizumab on chronic active lesions</b> <i>Speaker:</i> Marjo Nylund, FI	17:00 - 17:00
P594	<b>A comparison in performance of an automated Central Vein Sign (CVS) Detection method, select-6* counts, and CVS+ proportions for the diagnosis of multiple sclerosis – a multicenter study</b> <i>Speaker:</i> Abigail R Manning, US	17:00 - 17:00
P595	<b>An in vivo study of microglial activation and astrocyte reactivity in MS brain by PET-imaging and concurrent use of two radioligands</b> <i>Speaker:</i> Anna Vuorimaa, FI	17:00 - 17:00
P596	<b>SyMRI quantification of gray and white matter alterations in patients with MOG antibody-associated disease: associations with disability measures</b> <i>Speaker:</i> Theodoros Ladopoulos, DE	17:00 - 17:00
P597	<b>Soma and neurite density imaging (SANDI) as a novel diffusion model to better characterize multiple sclerosis brain neuroaxonal damage in vivo</b> <i>Speaker:</i> Monica Margoni, IT	17:00 - 17:00
P598	<b>MAGNON – implementation and contribution of lublin criteria and quantitative mri-analysis for daily clinical routine of MS patients</b> <i>Speaker:</i> Olaf Hoffmann, DE	17:00 - 17:00
P599	<b>Hippocampal atrophy in patients with early multiple sclerosis and its correlation to memory impairment</b> <i>Speaker:</i> Domenico Plantone, IT	17:00 - 17:00
P600	<b>Accounting for label uncertainty in training a machine learning model to predict new disease activity using MRI after a first clinical demyelinating event</b> <i>Speaker:</i> Maryam Tayyab, CA	17:00 - 17:00
P601	<b>The association between age and inflammatory disease activity on MRI in relapse onset multiple sclerosis</b> <i>Speaker:</i> Eline M.E. Coerver, NL	17:00 - 17:00
P602	<b>Assessment of brain volume loss by age in ponesimod relative to teriflunomide treated patients in the optimum phase 3 study</b>	17:00 - 17:00

	<i>Speaker:</i> Kavita Gandhi, US	
P603	<b>Choroid plexus volume is enlarged in clinically isolated syndrome patients with optic neuritis</b> <i>Speaker:</i> Alexander Klistorner, AU	17:00 - 17:00
P604	<b>Pattern of thalamic nuclei atrophy in early relapse-onset multiple sclerosis</b> <i>Speaker:</i> Sarah Levy, US	17:00 - 17:00
P605	<b>Differentiating MS lesions with or without paramagnetic rim with advanced MRI</b> <i>Speaker:</i> Francesco Tazza, IT	17:00 - 17:00
P606	<b>Application of generalised boundary shift integral to measure longitudinal atrophy in brain structures</b> <i>Speaker:</i> FATIMA CHOWDHURY, GB	17:00 - 17:00
P607	<b>The predictive value of diffusion tensor imaging on clinical, physical and cognitive disability in multiple sclerosis.</b> <i>Speaker:</i> Sara Llufríu, ES	17:00 - 17:00
P608	<b>Cognitive function and imaging correlates in MOGAD: a comparison with MS and NMOSD-AQP4</b> <i>Speaker:</i> Silvia Messina, GB	17:00 - 17:00
P609	<b>Investigating the relationship between white matter tracts and cognitive impairment in relapsing-remitting multiple sclerosis patients</b> <i>Speaker:</i> Mahmoud Elkhooly, US	17:00 - 17:00
P610	<b>Implementation of standardized MRI finding report form for daily neurological practice in Germany</b> <i>Speaker:</i> Birte Elias-Hamp, DE	17:00 - 17:00
P611	<b>Myelin content is different in the normal appearing white matter from multiple sclerosis brains with and without slowly evolving lesions</b> <i>Speaker:</i> Irene Vavasour, CA	17:00 - 17:00
P612	<b>TSPO-PET-measurable microglial activation is higher among males compared to females both in people with multiple sclerosis and healthy individuals</b> <i>Speaker:</i> Sini Laaksonen, FI	17:00 - 17:00
P613	<b>Attention-based deep learning with relevance distribution identifies regions on quantitative MR contrasts related to patient disability</b> <i>Speaker:</i> Po-Jui Lu, CH	17:00 - 17:00
P614	<b>Commercial automated MRI reporting tools in multiple sclerosis: a systematic review of the evidence</b> <i>Speaker:</i> Zoe Mendelsohn, GB	17:00 - 17:00
P615	<b>Quantifying white matter lesions in multiple sclerosis: a multiple technique comparison</b>	17:00 - 17:00

	<i>Speaker:</i> James Thorpe, GB	
P616	<b>7T imaging of multiple sclerosis: evidence for a diffusible agent with “surface in” cortical lesions</b> <i>Speaker:</i> Pearse Morris, US	17:00 - 17:00
P617	<b>Assessing heterogeneity of multiple sclerosis lesions in susceptibility-weighted MRI: a cross-sectional and longitudinal study</b> <i>Speaker:</i> Reza Rahmanzadeh, CH	17:00 - 17:00
P618	<b>Assessment of candidate MRI biomarkers of ongoing MS disease in the absence of acute inflammation</b> <i>Speaker:</i> Carmen Tur, ES	17:00 - 17:00
P619	<b>Neural network-based classification of remyelinated white matter lesions on quantitative susceptibility maps</b> <i>Speaker:</i> Nedim Šiši?, SI	17:00 - 17:00
P620	<b>Multiparametric quantitative MRI reveals progressive cortical damage over time in relapsing-remitting MS</b> <i>Speaker:</i> Michelle Maiworm, DE	17:00 - 17:00
P621	<b>First evidence on the utility of T<sub>1</sub> mapping of the optic nerve to investigate differences between MS and NMOSD</b> <i>Speaker:</i> Veronica Ravano, CH	17:00 - 17:00
P622	<b>Age-related decline in cerebral oxygen consumption in relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Maria Højberg Knudsen, DK	17:00 - 17:00
P623	<b>Higher mean intensities in the lateral ventricular region of FLAIR MRI may indicate higher disease activity in early RRMS</b> <i>Speaker:</i> Claudia Chien, DE	17:00 - 17:00
P624	<b>Towards better characterization of spinal cord pathology in early stages of multiple sclerosis using T1 mapping</b> <i>Speaker:</i> Jonathan Disselhorst, CH	17:00 - 17:00
P625	<b>Assessment of intrinsic bundle myelination: exploratory analysis for future application in MS</b> <i>Speaker:</i> Sara Bosticardo, IT	17:00 - 17:00
P626	<b>Brain MRI versus spinal cord MRI in measuring cervical spinal cord atrophy</b> <i>Speaker:</i> Burcu Zeydan, US	17:00 - 17:00
P627	<b>Increase in neuronal local connectivity following cortical demyelination prevents cognitive impairment in multiple sclerosis</b> <i>Speaker:</i> Giacomo Boffa, IT	17:00 - 17:00
P628	<b>Spinal cord reserve and disability worsening over time in patients with multiple sclerosis</b> <i>Speaker:</i> Serena Ruggieri, IT	17:00 - 17:00

P629	<b>Infratentorial lesions can predict conversion to clinically definite multiple sclerosis</b> <i>Speaker:</i> Joaquín Arzalluz Luque, ES	17:00 - 17:00
P630	<b>Improved assessment of leptomeningeal contrast enhancement via 3-Tesla 3D real inversion recovery MRI in multiple sclerosis</b> <i>Speaker:</i> Serhat V. Okar, US	17:00 - 17:00
P631	<b>Leveraging MRI biomarkers and neurobiological underpinnings of de-/re-myelination for translational drug research</b> <i>Speaker:</i> Tamara Zehnder, CH	17:00 - 17:00
P632	<b>Linking cortical demyelination to changes in brain metabolism in multiple sclerosis: a 7T MR spectroscopy study</b> <i>Speaker:</i> Mads Alexander Just Madsen, DK	17:00 - 17:00
P633	<b>Relationship between upper cervical cord atrophy and brain metrics of disease activity in MS</b> <i>Speaker:</i> Nur Neyal, US	17:00 - 17:00
P634	<b>Validation of a semi-automated method to quantify lesion volume changes in multiple sclerosis on 2D proton density-weighted images using subtraction imaging</b> <i>Speaker:</i> Rozemarijn M Mattiesing, NL	17:00 - 17:00
P635	<b>Venular distribution of MS cortical lesions with ultra-high field post-mortem MRI</b> <i>Speaker:</i> María Inés Gaitán, AR	17:00 - 17:00
P636	<b>7 tesla magnetic resonance imaging has superior sensitivity for enlarged perivascular spaces compared to 3 tesla in multiple sclerosis</b> <i>Speaker:</i> Benjamin V. Ineichen, SE	17:00 - 17:00
P637	<b>Robust marker for whole brain atrophy from multimodal MRI in MS</b> <i>Speaker:</i> Prasanna Parvathaneni, US	17:00 - 17:00
P638	<b>Association of the retinal vasculature and disease course in patients with relapsing remitting multiple sclerosis</b> <i>Speaker:</i> Christina Noll, DE	17:00 - 17:00
P639	<b>Retinal ganglion cell loss is associated with future disability worsening in early relapsing remitting multiple sclerosis</b> <i>Speaker:</i> Josephine Wauschkuhn, DE	17:00 - 17:00
P640	<b>Vitreomacular interface abnormalities in multiple sclerosis; a novel signature of disability</b> <i>Speaker:</i> Hussein Moussa, US	17:00 - 17:00
P641	<b>Using sector-to-channel correlation between mfVEP and OCT to study trans-synaptic degeneration in multiple sclerosis</b> <i>Speaker:</i> Su-Chun Huang, IT	17:00 - 17:00
P642	<b>Optic nerve head morphometry in multiple sclerosis using deep learning and geometric modelling</b>	17:00 - 17:00

	<i>Speaker:</i> Seyedamirhosein Motamedi, DE	
P643	<b>Optical coherence tomography angiography for differential diagnosis of multiple sclerosis and Sjögren's syndrome</b> <i>Speaker:</i> Elisabeth Wolf, DE	17:00 - 17:00
P644	<b>Longitudinal retinal vessel loss indicates progressive grey matter atrophy in patients with relapsing remitting multiple sclerosis</b> <i>Speaker:</i> Eva Feodora Romahn, DE	17:00 - 17:00
P645	<b>Optical coherence tomography is associated with cognitive and physical disability independently of other biomarkers</b> <i>Speaker:</i> Nuria Cerdá Fuertes, CH	17:00 - 17:00
P646	<b>Correlation of optic coherence tomography and angiography with cognitive functions in multiple sclerosis</b> <i>Speaker:</i> Sinem Ozcelik, TR	17:00 - 17:00
P647	<b>Hemi-macular atrophy in multiple sclerosis: a potential representation of trans-synaptic neurodegeneration extending beyond the inner retina</b> <i>Speaker:</i> Grigorios Kalaitzidis, US	17:00 - 17:00
P648	<b>Cerebrospinal fluid analysis in a paediatric cohort of patients with MOG antibody – associated disorders</b> <i>Speaker:</i> Giulia Galati, FR	17:00 - 17:00
P649	<b>Liquid biopsy: miRNAs signatures in multiple sclerosis patients</b> <i>Speaker:</i> Sunny Malhotra, ES	17:00 - 17:00
P650	<b>Serum neurofilament light chain levels at disease onset and high efficacy treatments to predict disability progression among patients with a CIS</b> <i>Speaker:</i> Enric Monreal, ES	17:00 - 17:00
P651	<b>Multivariate proteomic analysis and the relationship with axonal pathology in multiple sclerosis: a longitudinal 5-year diffusion tensor imaging study</b> <i>Speaker:</i> Dejan Jakimovski, US	17:00 - 17:00
P652	<b>Machine learning identifies a combination of immunological and clinical parameters as the best predictor of MS disease progression</b> <i>Speaker:</i> Stephanie Zandee, CA	17:00 - 17:00
P653	<b>Blood serum proteome correlates of multiple sclerosis disease progression as evaluated by clinical and brain atrophy outcomes: a 5-year longitudinal study</b> <i>Speaker:</i> Ferhan Qureshi, US	17:00 - 17:00
P654	<b>Clinical phenotypes from blood serum protein concentration</b> <i>Speaker:</i> Ati Ghoreyshi, US	17:00 - 17:00
P655	<b>Plasma sphingolipid as an adjunct biomarker in patients with neuromyelitis optica spectrum disorder</b>	17:00 - 17:00

	<i>Speaker:</i> Hyunjin Kim, KR	
P656	<b>Cerebrospinal fluid soluble CD27 is a highly sensitive marker of CSF inflammation and is associated with B cell activity in relapsing remitting multiple sclerosis</b> <i>Speaker:</i> Jeppe Romme Christensen, DK	17:00 - 17:00
P657	<b>Renal function influences serum neurofilament light chain levels in patients with multiple sclerosis</b> <i>Speaker:</i> Raquel Gasque Rubio, ES	17:00 - 17:00
P658	<b>Expression of the cell senescence marker p16ink4a is elevated in MS patients and reduced in those on B-cell depleting therapies</b> <i>Speaker:</i> Jennifer Graves, US	17:00 - 17:00
P659	<b>Neurofilament light-chain and CSF parameters do not change after SARS-COV-2 vaccination in patients with MS</b> <i>Speaker:</i> Salvatore Iacono, IT	17:00 - 17:00
P660	<b>Mitochondrial measures in neuronally-enriched extracellular vesicles predict brain and retinal atrophy in multiple sclerosis</b> <i>Speaker:</i> Dimitrios C. Ladakis, US	17:00 - 17:00
P661	<b>Evaluation of two automatic image-processing approaches for oligoclonal band detection: an expert system and a deep learning model</b> <i>Speaker:</i> Farah Haddad, FR	17:00 - 17:00
P662	<b>Serum neurofilament light chain identifies multiple sclerosis patients with severe focal axonal damage in a 6-year longitudinal cohort</b> <i>Speaker:</i> Falk Steffen, DE	17:00 - 17:00
P663	<b>Serum neurofilament light levels in relation to the Brain-Age Paradigm in normal ageing</b> <i>Speaker:</i> Rina Demjaha, AT	17:00 - 17:00
P664	<b>Use of individual measure and z-scores to monitor disease course in relapsing multiple sclerosis: a 1-year prospective study in a single center</b> <i>Speaker:</i> Sara Gil-Perotin, ES	17:00 - 17:00
P665	<b>Identifying multiple sclerosis biomarkers in blood using high-sensitivity technologies</b> <i>Speaker:</i> Jesse Huang, SE	17:00 - 17:00
P666	<b>The quantification of NLRP3 in cerebrospinal fluid and the analysis for the relationship to the disease severity in the central nervous system demyelinating disorders: a pilot study</b> <i>Speaker:</i> Jun-Soon Kim, KR	17:00 - 17:00
P667	<b>Serum neurofilament light chain and subcortical atrophy in a large population of people with multiple sclerosis</b> <i>Speaker:</i> Kathryn Fitzgerald, US	17:00 - 17:00

P668	<b>Increased serum glial fibrillary acidic protein (GFAP) levels predict disease progression in B cell depleted patients with progressive MS</b> <i>Speaker:</i> Pascal Benkert, CH	17:00 - 17:00
P669	<b>Do we have reliable predictors of future disease activity in patients after the first demyelinating event suggestive of MS?</b> <i>Speaker:</i> Tomas Uher, CZ	17:00 - 17:00
P670	<b>Relationship between brain hypoxia and functional connectivity (FC), measured with near-infrared spectroscopy (NIRS), in multiple sclerosis (MS)</b> <i>Speaker:</i> Ateyeh Soroush, CA	17:00 - 17:00
P671	<b>Can we detect radiological disease activity in multiple sclerosis using digital biomarkers?</b> <i>Speaker:</i> Pam Christina Gea Molenaar, NL	17:00 - 17:00
P672	<b>Psychomotor assessment using fitts tapping test in multiple sclerosis: reproducibility and validation study</b> <i>Speaker:</i> Klaudia Duka Glavor, HR	17:00 - 17:00
P673	<b>Investigating fluctuations of spontaneous EEG topographies in fatigued patients with multiple sclerosis</b> <i>Speaker:</i> Sara Baldini, IT	17:00 - 17:00
P674	<b>Blood-derived-extracellular vesicles as biomarker of response to treatment in multiple sclerosis</b> <i>Speaker:</i> Gabriel Torres Iglesias, ES	17:00 - 17:00
P675	<b>Fecal metagenomics may discriminate between patients with first demyelinating episode in the context of clinically isolated syndrome and/or relapsing-remitting multiple sclerosis and patients with later stages of the disease</b> <i>Speaker:</i> Marina Kleopatra Boziki, GR	17:00 - 17:00
P676	<b>Using transcranial magnetic stimulation to investigate the acute effects of translingual neurostimulation in individuals with multiple sclerosis</b> <i>Speaker:</i> Abby E Blaney, CA	17:00 - 17:00
P677	<b>Subclinical vascular disease markers and coagulation disorders in multiple sclerosis</b> <i>Speaker:</i> Jose María Prieto González, ES	17:00 - 17:00
P678	<b>Pathophysiological mechanisms of motor fatigue in people with multiple sclerosis: new insights from advanced neurophysiological techniques</b> <i>Speaker:</i> Giorgio Leodori, IT	17:00 - 17:00
P679	<b>Unraveling the power spectrum in multiple sclerosis phenotypes: an explorative magnetoencephalography study</b> <i>Speaker:</i> Lodewijk Reinier Johannes De Ruiter, NL	17:00 - 17:00
P680	<b>Magnetoencephalography as a potential predictor of clinical</b>	17:00 - 17:00



	<b>progression in patients with multiple sclerosis: a longitudinal study</b> <i>Speaker:</i> Lodewijk Reinier Johannes De Ruiter, NL	
P681	<b>What if it's not MS? Long-term outcomes in other paediatric monophasic and multiphasic demyelinating syndromes</b> <i>Speaker:</i> Charly Billaud, GB	17:00 - 17:00
P682	<b>Vagus nerve stimulation attenuates disease severity in a rat EAE model of multiple sclerosis</b> <i>Speaker:</i> Chandramohan Natarajan, US	17:00 - 17:00
P683	<b>Monotherapy for multiple autoimmune diseases: the novel use of ofatumumab for concurrent multiple sclerosis and autoimmune hepatitis</b> <i>Speaker:</i> Christina Awad, US	17:00 - 17:00
P684	<b>NEDA-4 with ublituximab versus teriflunomide in the ULTIMATE I and II studies in participants with relapsing multiple sclerosis</b> <i>Speaker:</i> Enrique Alvarez, US	17:00 - 17:00
P685	<b>Immunity following SARS-CoV-2 vaccination in autoimmune neurological disorders treated with rituximab or ocrelizumab</b> <i>Speaker:</i> Petra Nytrova, CZ	17:00 - 17:00
P686	<b>An interim analysis of efficacy and safety data in Black and Hispanic patients with multiple sclerosis receiving ocrelizumab treatment in the CHIMES trial</b> <i>Speaker:</i> Evanthia Bernitsas, US	17:00 - 17:00
P687	<b>Attenuation of immune activation in patients with multiple sclerosis on a wheat free diet: a pilot crossover trial</b> <i>Speaker:</i> Felix Luessi, DE	17:00 - 17:00
P688	<b>Disease outcomes with ublituximab in treatment-naïve participants: subpopulation analyses of the phase 3 ULTIMATE I and II studies in participants with relapsing multiple sclerosis</b> <i>Speaker:</i> Christopher A Garner, US	17:00 - 17:00
P689	<b>Temporal evolution of humoral and T-cell specific immune response to COVID-19 mRNA vaccine in multiple sclerosis</b> <i>Speaker:</i> Serena Ruggieri, IT	17:00 - 17:00
P690	<b>GB7208 is a novel, highly potent and selective CNS-penetrant BTK inhibitor for neuroinflammatory and neurodegenerative diseases</b> <i>Speaker:</i> Isharat Yusuf, US	17:00 - 17:00
P691	<b>Cytokine profile of cell-mediated immune responses to SARS-CoV-2 mRNA and protein-based vaccines in patients with multiple sclerosis</b> <i>Speaker:</i> Georges Katoul Al Rahbani, DE	17:00 - 17:00
P692	<b>Pilot study: vagus nerve stimulation reduces microglia around a demyelinating lesion in a lysolecithin-induced demyelination</b>	17:00 - 17:00

	<b>model</b> <i>Speaker:</i> Helen Bachmann, BE	
P693	<b>Evobrutinib, a Bruton's tyrosine kinase inhibitor, acts on microglia: implications in treatment of progressive multiple sclerosis mechanisms</b> <i>Speaker:</i> Anastasia Geladaris, DE	17:00 - 17:00
P694	<b>The MultipleMS prospective cohort study: Clinical characteristics and treatment of patients with multiple sclerosis in 7 European countries</b> <i>Speaker:</i> Martina Wenzel, DE	17:00 - 17:00
P695	<b>Natalizumab continuation versus switching to ocrelizumab in RRMS patients: an observational analysis</b> <i>Speaker:</i> Albert Muñoz-Vendrell, ES	17:00 - 17:00
P696	<b>Oral n-acetylglucosamine in multiple sclerosis patients raises n-glycan branching and modifies serum cytokine levels</b> <i>Speaker:</i> Michael Sy, US	17:00 - 17:00
P697	<b>Cladribine effects on T and B cell subsets and T cell reactivity in multiple sclerosis</b> <i>Speaker:</i> Rikke Holm Hansen, DK	17:00 - 17:00
P698	<b>Factors related to favorable response to plasma exchange in acute relapses of inflammatory demyelinating diseases: a multicenter experience</b> <i>Speaker:</i> JUAN LUIS CHICO GARCIA, ES	17:00 - 17:00
P699	<b>A multicentre, open label, single-arm, phase 3b study (CONSONANCE) to assess the effectiveness and safety of ocrelizumab in patients with primary and secondary progressive multiple sclerosis: year 2 interim analysis</b> <i>Speaker:</i> Giancarlo Comi, IT	17:00 - 17:00
P700	<b>B-cell depletion and return in participant subgroups of the phase 3 ULTIMATE I and II studies of ublituximab versus teriflunomide in participants with relapsing multiple sclerosis</b> <i>Speaker:</i> Edward Fox, US	17:00 - 17:00
P701	<b>Multiple sclerosis patient types, treatment patterns, and therapy selection considerations: patient-level retrospective chart audit data comparison by managing physician specialty</b> <i>Speaker:</i> Emma McFadden, US	17:00 - 17:00
P702	<b>Selection of disease-modifying therapies in elderly MS patients: Data from a nationwide registry</b> <i>Speaker:</i> Maria Celica Ysraelit, AR	17:00 - 17:00
P703	<b>Differences in prescribing patterns for the treatment of multiple sclerosis between neuroimmunology subspecialists and other providers at duke university hospital</b> <i>Speaker:</i> Kristen Veal, US	17:00 - 17:00

P704	<b>A study of activated and naïve T regs and B cell subsets for 30 months after the use of cladribine</b> <i>Speaker:</i> Suzanne Hodgkinson, AU	17:00 - 17:00
P705	<b>Comparative effectiveness of autologous haematopoietic stem cell transplantation with immune reconstitution therapies in relapsing-remitting MS</b> <i>Speaker:</i> Tomas Kalincik, AU	17:00 - 17:00
P706	<b>Is disease-modifying therapy use in the multiple sclerosis a risk factor during the COVID-19 pandemic? A large cohort study</b> <i>Speaker:</i> Serkan Ozakbas, TR	17:00 - 17:00
P707	<b>Relationship between infections and absolute lymphocyte count during phase 3 and open-label extension trials of ozanimod in patients with relapsing multiple sclerosis</b> <i>Speaker:</i> Hans-Peter Hartung, DE	17:00 - 17:00
P708	<b>Matching-adjusted indirect comparisons of diroximel fumarate, ponesimod, and teriflunomide for relapsing multiple sclerosis</b> <i>Speaker:</i> Tammy Jiang, US	17:00 - 17:00
P709	<b>Effect of SARS-CoV-2 vaccination on natural killer cell responses in multiple sclerosis</b> <i>Speaker:</i> Alice Laroni, IT	17:00 - 17:00
P710	<b>Mesenchymal stem cells for multiple sclerosis: effect of treatment on peripheral immune cells</b> <i>Speaker:</i> Alice Laroni, IT	17:00 - 17:00
P711	<b>Tracking the immune response to SARS-CoV-2 mRNA vaccines in ofatumumab treated RMS patients in a multicenter study (KYRIOS trial)</b> <i>Speaker:</i> Tjalf Ziemssen, DE	17:00 - 17:00
P712	<b>Diroximel fumarate in patients with relapsing-remitting multiple sclerosis: final safety and efficacy results from the phase 3 EVOLVE-MS-1 study</b> <i>Speaker:</i> Barry Singer, US	17:00 - 17:00
P713	<b>Preserved T cell but attenuated antibody response in MS patients on Fingolimod and Ocrelizumab following 2<sup>nd</sup> and 3<sup>rd</sup> SARS-CoV-2 mRNA vaccine</b> <i>Speaker:</i> SHRISHTI SAXENA, US	17:00 - 17:00
P714	<b>A long term multicenter observational study on the efficacy and safety of alemtuzumab in multiple sclerosis highly active naïve patients</b> <i>Speaker:</i> Lucia Moiola, IT	17:00 - 17:00
P715	<b>Immunotherapy for people with clinically isolated syndrome or relapsing-remitting multiple sclerosis - treatment response by demographic, clinical, and biomarker subgroups: a systematic review and meta-analysis</b> <i>Speaker:</i> Christoph Heesen, DE	17:00 - 17:00

P716	<b>Neuroprotective effects of RP-101074 in a preclinical, non-inflammatory neurodegeneration animal model</b> <i>Speaker:</i> Mustafa Sindi, DE	17:00 - 17:00
P717	<b>Early onset of action and sustained efficacy of MRI outcomes during cladribine tablets treatment in highly active relapsing multiple sclerosis: results of the 2-year MAGNIFY-MS study</b> <i>Speaker:</i> Nicola De Stefano, IT	17:00 - 17:00
P718	<b>The monoselective sphingosine-1-phosphate receptor-1 modulator ponesimod enhances remyelination in the cuprizone model of demyelination</b> <i>Speaker:</i> Melissa Schepers, BE	17:00 - 17:00
P719	<b>Oral administration of a novel small molecule that blocks BMP-signaling ameliorates EAE through oligodendrogenesis and remyelination</b> <i>Speaker:</i> Arnon Karni, IL	17:00 - 17:00
P720	<b>Preservation of myelin in patients with relapsing multiple sclerosis treated with ponesimod compared to teriflunomide</b> <i>Speaker:</i> Ritobrato Datta, US	17:00 - 17:00
P721	<b>NurOwn (MSC-NTF) phase 2 clinical trial in progressive MS: effects on CSF neuroprotective biomarkers</b> <i>Speaker:</i> Jeffrey Cohen, US	17:00 - 17:00
P722	<b>Acceleration of debris clearance and remyelination by neuroimmune modulation</b> <i>Speaker:</i> Yaakov Levine, US	17:00 - 17:00
P723	<b>Long-term efficacy and safety of ocrelizumab in treatment-naïve patients with early relapsing multiple sclerosis: 7-year data from the OPERA open-label extension trials</b> <i>Speaker:</i> Joao Jose Cerqueira, PT	17:00 - 17:00
P724	<b>Predictors of infection, hypogammaglobulinemia, lymphopenia and neutropenia in multiple sclerosis patients treated with rituximab</b> <i>Speaker:</i> Jakob Rishovd Karlowicz, NO	17:00 - 17:00
P725	<b>Infusion-related reactions with ocrelizumab in relapsing multiple sclerosis: Over 9 years of data from OPERA OLE</b> <i>Speaker:</i> Daniel Ontaneda, US	17:00 - 17:00
P726	<b>COVID-19 outcomes in fingolimod- or siponimod - treated patients: clinical trial and post marketing cases</b> <i>Speaker:</i> Joseph Berger, US	17:00 - 17:00
P727	<b>High adherence and minimal delays of year 2 treatment in people with multiple sclerosis treated with cladribine tablets: results from multi-country patient support programmes</b> <i>Speaker:</i> Jiwon Oh, CA	17:00 - 17:00
P728	<b>Clinical effectiveness and safety of cladribine tablets for</b>	17:00 - 17:00

	<p><b>patients treated at least 12 months in the Swedish post-market surveillance study “immunomodulation and multiple sclerosis epidemiology 10” (IMSE 10)</b></p> <p><i>Speaker:</i> Linda Forsberg, SE</p>	
P729	<p><b>Very-early treatment in patients with CIS or early MS: a propensity analysis using a novel magnetic resonance score</b></p> <p><i>Speaker:</i> Álvaro Cobo-Calvo, ES</p>	17:00 - 17:00
P730	<p><b>Early use of high efficacy therapies in pediatric forms of relapsing-remitting multiple sclerosis: a real-life observational study</b></p> <p><i>Speaker:</i> Augustin Moreau, FR</p>	17:00 - 17:00
P731	<p><b>MRI and clinical outcomes of evobrutinib, a Bruton’s tyrosine kinase inhibitor, in relapsing multiple sclerosis over 2.5 years of the open-label extension to a Phase 2 trial</b></p> <p><i>Speaker:</i> Patrick Vermersch, FR</p>	17:00 - 17:00
P732	<p><b>Safety patterns with ozanimod during phase 3 and open-label extension trials in patients with relapsing multiple sclerosis</b></p> <p><i>Speaker:</i> Krzysztof Selmaj, PL</p>	17:00 - 17:00
P733	<p><b>The impact of disease modifying therapy on information processing speed in multiple sclerosis</b></p> <p><i>Speaker:</i> Albert Aboseif, US</p>	17:00 - 17:00
P734	<p><b>Compliance and persistence with ofatumumab treatment in patients with relapsing multiple sclerosis in clinical trials for up to 4 years</b></p> <p><i>Speaker:</i> Enrique Alvarez, US</p>	17:00 - 17:00
P735	<p><b>Flushing and gastrointestinal adverse event analysis from the phase 3 EVOLVE-MS-1 study of diroximel fumarate in patients with relapsing-remitting multiple sclerosis</b></p> <p><i>Speaker:</i> Simon Faissner, DE</p>	17:00 - 17:00
P736	<p><b>Serological effect of mRNA vaccination against COVID-19 in multiple sclerosis patients treated with immunosuppressive DMTs</b></p> <p><i>Speaker:</i> Valentina Mazziotti, IT</p>	17:00 - 17:00
P737	<p><b>Efficacy and persistence between dimethyl fumarate, fingolimod, and ocrelizumab after natalizumab cessation</b></p> <p><i>Speaker:</i> Chao Zhu, AU</p>	17:00 - 17:00
P738	<p><b>Long-term safety of teriflunomide in multiple sclerosis patients: results of prospective comparative studies in three European countries</b></p> <p><i>Speaker:</i> Melinda Magyari, DK</p>	17:00 - 17:00
P739	<p><b>Safety of shorter ocrelizumab infusion confirmed over multiple administrations: results of the ENSEMBLE PLUS substudy</b></p> <p><i>Speaker:</i> Joep Killestein, NL</p>	17:00 - 17:00

P740	<b>Does routine urinalysis prior to ocrelizumab infusion improve patient safety and experience? Audit of practice at a single centre</b> <i>Speaker:</i> Rachel Dorsey - Campbell, GB	17:00 - 17:00
P741	<b>OPERA-ting differently: could extending the time-interval between infusions of ocrelizumab maintain efficacy in MS patients while reducing the risk of adverse events? A retrospective study</b> <i>Speaker:</i> Jacopo Perugini, IT	17:00 - 17:00
P742	<b>Effective humoral and cellular immunity in mRNA-COVID-19 multiple sclerosis vaccinees treated with teriflunomide</b> <i>Speaker:</i> Anat Achiron, IL	17:00 - 17:00
P743	<b>Multiple sclerosis, rituximab, SARS-CoV-2 vaccination, and COVID-19 severity</b> <i>Speaker:</i> Annette Langer-Gould, US	17:00 - 17:00
P744	<b>Longitudinal humoral response in MS patients treated with Cladribine tablets after receiving the second and third doses of SARS-CoV-2 mRNA vaccine</b> <i>Speaker:</i> Ariel Rechtman, IL	17:00 - 17:00
P745	<b>Management of ocrelizumab in MS patients during the COVID-19 pandemic: an observational registry-based study</b> <i>Speaker:</i> Alvino Bisecco, IT	17:00 - 17:00
P746	<b>Natalizumab, a valuable strategy for immunisation to avoid delays of treatment onset in highly active MS patients</b> <i>Speaker:</i> René Carvajal, ES	17:00 - 17:00
P747	<b>Severe COVID-19 outcomes following vaccination in persons with multiple sclerosis: a real-world evidence study</b> <i>Speaker:</i> Caroline Geiger, US	17:00 - 17:00
P748	<b>Impact of extended interval dosing of ocrelizumab on immunoglobulin levels in multiple sclerosis</b> <i>Speaker:</i> Katrin Pape, DE	17:00 - 17:00
P749	<b>Infusion related reactions during shorter infusion of ocrelizumab: a real-world single centre experience</b> <i>Speaker:</i> Laura Brambilla, IT	17:00 - 17:00
P750	<b>StratifyJCV™ serum anti-JCV antibody assay for natalizumab patients: Unilabs global cohort data descriptive analysis and Unilabs customer satisfaction survey results</b> <i>Speaker:</i> Annemarie Drenth, CH	17:00 - 17:00
P751	<b>Post-vaccination SARS-Cov-2 spike-specific memory T-cell repertoires in patients with multiple sclerosis and related disorders</b> <i>Speaker:</i> Asaff Harel, US	17:00 - 17:00
P752	<b>Assessing treatment response to oral drugs for multiple</b>	17:00 - 17:00

	<b>sclerosis in real world setting: a MAGNIMS study</b> <i>Speaker:</i> Serena Ruggieri, IT	
P753	<b>Effect of ocrelizumab on leptomeningeal inflammation and humoral response to Epstein Barr-Virus in multiple sclerosis</b> <i>Speaker:</i> Robert Zivadinov, US	17:00 - 17:00
P754	<b>Better coping with multiple sclerosis is associated with enhanced compliance to early immunomodulatory treatment</b> <i>Speaker:</i> Alon Kotev, IL	17:00 - 17:00
P755	<b>Soluble vascular cell adhesion molecule-1 and natalizumab plasma concentration as potential biomarkers for monitoring treatment of multiple sclerosis patients with natalizumab</b> <i>Speaker:</i> Michael Auer, AT	17:00 - 17:00
P756	<b>Pharmacogenomic predictors of fingolimod response in relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Maria Pia Campagna, AU	17:00 - 17:00
P757	<b>Therapeutic efficacy of MRI: association between MRI utilization and DMT switch among people with MS in the United States</b> <i>Speaker:</i> Hayden Naizer, US	17:00 - 17:00
P758	<b>Transcriptome alterations in peripheral blood B cells of patients with multiple sclerosis under immune reconstitution therapy</b> <i>Speaker:</i> Michael Hecker, DE	17:00 - 17:00
P759	<b>Rapid discontinuation of baclofen as a treatment for spasticity among MS patients with incident and prevalent diagnoses</b> <i>Speaker:</i> Kelsi Alexandra Smith, SE	17:00 - 17:00
P760	<b>Botulinum toxin trial treatment for MS- tremor: a randomized, double-blinded study</b> <i>Speaker:</i> Anneke van der Walt, AU	17:00 - 17:00
P761	<b>Eculizumab use in neuromyelitis optica spectrum disorders: real-world evidence from Germany and Austria</b> <i>Speaker:</i> Marius Ringelstein, DE	17:00 - 17:00
P762	<b>Real-world use of cladribine tablets (Completion rates and treatment persistence) In patients with multiple sclerosis in England: the CLARENCE Study</b> <i>Speaker:</i> Wallace J. Brownlee, GB	17:00 - 17:00
P763	<b>Differences between clinical trials and “real-world” use of disease modifying therapies: insights from the UK OPTIMISE:MS pharmacovigilance study</b> <i>Speaker:</i> Ruth Dobson, GB	17:00 - 17:00
P764	<b>Evaluating the effect of disease duration in high efficacy versus mid efficacy disease modifying therapies: could this help in deciding when to de-escalate?</b> <i>Speaker:</i> Brandi Vollmer, US	17:00 - 17:00
P765	<b>Real world evidence for cladribine and fingolimod: comparative</b>	17:00 - 17:00

	<b>effectiveness study after 2 years of follow-up</b> <i>Speaker:</i> Patricia Mulero, ES	
P766	<b>Early MRI activity predicts subsequent disease activity in multiple sclerosis patients treated with cladribine</b> <i>Speaker:</i> Carlos Manuel Romero-Sanchez, ES	17:00 - 17:00
P767	<b>Assessing the impacts of persistency for disease modifying therapies in a German registry for multiple sclerosis</b> <i>Speaker:</i> Maximilian Schuier, DE	17:00 - 17:00
P768	<b>Horizontal versus vertical switch of treatment in patients with relapsing-remitting multiple sclerosis in Austria</b> <i>Speaker:</i> Michael Guger, AT	17:00 - 17:00
P769	<b>Predictors of treatment switching in the big multiple sclerosis data network – an update</b> <i>Speaker:</i> Tim Spelman, AU	17:00 - 17:00
P770	<b>Trajectories of disease-modifying therapies and associated sickness absence and disability pension among people with multiple sclerosis</b> <i>Speaker:</i> Fitsum Sebsibe Teni, SE	17:00 - 17:00
P771	<b>Ocrelizumab in patients with early-stage RRMS – results from the phase IIIb ENSEMBLE trial and the matched real-world NTD MS registry cohort</b> <i>Speaker:</i> Hans-Peter Hartung, DE	17:00 - 17:00
P772	<b>Treatment emergent adverse events experienced early and transiently in the treatment course with cladribine tablets: data from the CLEVER real-world study</b> <i>Speaker:</i> Tjalf Ziemssen, DE	17:00 - 17:00
P773	<b>Experience with cladribine in multiple sclerosis patients in the third and forth year of treatment</b> <i>Speaker:</i> Virginia Meca-Lallana, ES	17:00 - 17:00
P774	<b>Maven4: Phase IV non interventional, prospective, Spanish multicenter study to evaluate Cladribine tablets long term effectiveness on real-world clinical practice</b> <i>Speaker:</i> Albert Saiz, ES	17:00 - 17:00
P775	<b>Patient education for fatigue in people with multiple sclerosis: cochrane systematic review and meta-analysis</b> <i>Speaker:</i> Andrea Giordano, IT	17:00 - 17:00
P776	<b>Employment and cognitive improvements in ocrelizumab-treated patients with relapsing-remitting multiple sclerosis: 96-week CASTING study data</b> <i>Speaker:</i> Heinz Wiendl, DE	17:00 - 17:00
P777	<b>Memory rehabilitation for people with multiple sclerosis</b> <i>Speaker:</i> Lauren A Taylor, GB	17:00 - 17:00
P778	<b>Polypharmacy, anticholinergic medication burden, and</b>	17:00 - 17:00



	<b>objective cognitive performance in adults with multiple sclerosis (MS)</b> <i>Speaker:</i> Joanie M. Huebner, US	
P779	<b>The insula modulates the effects of aerobic training on cardiovascular function and ambulation in multiple sclerosis</b> <i>Speaker:</i> Matteo Albergoni, IT	17:00 - 17:00
P780	<b>Progressive multifocal encephalopathy in the first patient with relapsing-remitting multiple sclerosis treated with ocrelizumab</b> <i>Speaker:</i> Marc Puig Casadevall, ES	17:00 - 17:00
P781	<b>COVID-19 humoral and T-cell mediated vaccination responses in people with multiple sclerosis</b> <i>Speaker:</i> Nikki Vickaryous, GB	17:00 - 17:00
P782	<b>Wearing-off effect reports of people with multiple sclerosis treated with ocrelizumab in Canada: a descriptive summary of real-world data</b> <i>Speaker:</i> Sarah Morrow, CA	17:00 - 17:00
P783	<b>Patient's experience and quality of care when moving to at home natalizumab: a prospective evaluation of multiple sclerosis patients (TYSAD-35)</b> <i>Speaker:</i> Simon Lamy, FR	17:00 - 17:00
P784	<b>Cladribine protects SH-SY5Y neuron-like cells from oxidative stress conditions in vitro</b> <i>Speaker:</i> Herena Eixarch, ES	17:00 - 17:00
P785	<b>Prevalence and characteristics of MS patients with COVID-19 infection at Karolinska University Hospital, Stockholm, Sweden</b> <i>Speaker:</i> Linn Nygard, SE	17:00 - 17:00
P787	<b>Barriers to access multiple sclerosis disease-modifying therapies in middle east and north africa: a regional survey-based study</b> <i>Speaker:</i> Maya Zeineddine, FR	17:00 - 17:00
P788	<b>A randomized, double-blind controlled clinical study to determine the effectiveness, safety and tolerability of actoferon<sup>®</sup> compared to betaferon<sup>®</sup> in subjects with relapsing remitting multiple sclerosis (RRMS)</b> <i>Speaker:</i> Seyed Massood Nabavi, IR	17:00 - 17:00
P789	<b>Do multiple sclerosis drugs decrease the risk of a severe SARS-CoV-2 infection?</b> <i>Speaker:</i> Cristina Ramo Tello, ES	17:00 - 17:00
P790	<b>The impact of COVID-19 pandemic on physical activity in persons with multiple sclerosis: an international RIMS-SIG Mobility study</b> <i>Speaker:</i> Lousin Moumdjian, BE	17:00 - 17:00
P791	<b>Changes in sedentary behaviour and physical activity in</b>	17:00 - 17:00

	<b>response to an exercise intervention in persons with multiple sclerosis</b> <i>Speaker:</i> Ine Nieste, BE	
P792	<b>Can a seated 6-minutes knee antiphase movement test help understand walking fatigability in moderately disabled people with MS through a movement control perspective? Preliminary results</b> <i>Speaker:</i> Felipe Balistieri Santinelli, BE	17:00 - 17:00
P793	<b>COVID-19 and multiple sclerosis: a thematic analysis of the unique experiences of people with multiple sclerosis during the COVID-19 pandemic</b> <i>Speaker:</i> Andrea Simcock-Davies, GB	17:00 - 17:00
P794	<b>Short- and long-term perceived improvement in self-efficacy of people with multiple sclerosis participating in an individualised physiotherapy outdoor-group and digital intervention, emphasising trunk control and high intensity physical activity</b> <i>Speaker:</i> Stine Susanne Haakonsen Dahl, NO	17:00 - 17:00
P795	<b>A pilot study examining the feasibility and acceptability of a weight loss and healthy lifestyle intervention in people with multiple sclerosis</b> <i>Speaker:</i> Julia Cozart, US	17:00 - 17:00
P796	<b>Sustained attention during prolonged walking in persons with multiple sclerosis</b> <i>Speaker:</i> Zuhail Abbas, TR	17:00 - 17:00
P797	<b>Sleep quality and fatigue is independent phenomena and show different treatment response to multidisciplinary rehabilitation - The Danish MS Hospitals Rehabilitation Study</b> <i>Speaker:</i> Morten Riemenschneider, DK	17:00 - 17:00
P798	<b>The impact of the COVID-19 pandemic on physiotherapy services for people with multiple sclerosis: a multicentre survey study of the RIMS network</b> <i>Speaker:</i> Turhan Kahraman, TR	17:00 - 17:00
P799	<b>A multiple sclerosis training using the kinect-based MS-FIT exergame. An Italian multicenter feasibility study</b> <i>Speaker:</i> Andrea Tacchino, IT	17:00 - 17:00
P1196	<b>Impact of inflammatory cues on microglial-axon contacts at the nodes of Ranvier in Multiple Sclerosis and its experimental models</b>	17:00 - 17:00
P1197	<b>The transcriptomic and clonal landscape of Multiple Sclerosis: a single-cell RNA sequencing study</b>	17:00 - 17:00

P1198	<b>Serum Neurofilament Light Chain Levels and NEDA-3 Status With Ofatumumab Treatment in RMS Patients: Longer-term Analysis from ASCLEPIOS I/II and ALITHIOS</b>	17:00 - 17:00
P1199	<b>Serologic Response and Clinical Outcomes of SARS-CoV-2 Infection and Vaccination in Ozanimod-Treated Participants With Relapsing Multiple Sclerosis</b>	17:00 - 17:00
P1200	<b>Anti-Argonaut antibodies as a potential biomarker in NMORD</b>	17:00 - 17:00
P1201	<b>In vivo SANDI shows cellularity-related changes in cortical lesions and neuronal loss in the outer cortical layer in MS patients</b>	17:00 - 17:00
P1202	<b>Assessing lesion sensitivity and brain atrophy using portable low-field MRI in multiple sclerosis</b>	17:00 - 17:00
P1203	<b>Progression independent of relapse activity (PIRA) in relapsing-remitting multiple sclerosis patients on injectable vs oral first line Disease Modifying Therapies: an Italian MS registry study</b>	17:00 - 17:00
P1204	<b>Amyloid and some tau proteinopathy are observed in a subset of individuals with Multiple Sclerosis</b>	17:00 - 17:00
P1205	<b>Vaccination behaviour in people diagnosed with multiple sclerosis</b>	17:00 - 17:00
P1206	<b>Results from PREVANZ, a phase 2b placebo controlled double blind dose ranging study of vitamin D to prevent progression to definite multiple sclerosis after a high risk clinically isolated syndrome</b>	17:00 - 17:00
P1207	<b>Distinguishing CNS-infiltrating from -resident immune cells in multiple sclerosis through integrative single-cell transcriptomics</b>	17:00 - 17:00
P1208	<b>Multiple Sclerosis disease states as identified by unsupervised machine learning on multimodal longitudinal patient trajectories</b>	17:00 - 17:00
P1209	<b>Anti-JC virus serostatus changes before and during the COVID-19 pandemic in US patients with multiple sclerosis treated with natalizumab</b>	17:00 - 17:00
P1210	<b>Efficacy of Early Ofatumumab versus Late-Switch from Teriflunomide: Subgroup Analysis of the ALITHIOS Open-Label Extension Study by Prior Disease Modifying Therapy Exposure and Age</b>	17:00 - 17:00
P1211	<b>Open-label, Multicentre, Phase 4 Study Assessing Immune Response to Influenza Vaccine in Patients With Relapsing Multiple Sclerosis Treated With Ofatumumab: Interim Results</b>	17:00 - 17:00

*Satellite Symposium*  
18:00 - 19:00

Room 1

**Satellite Symposium 9**

*Satellite Symposium*

18:00 - 19:00

Room 2

**Satellite Symposium 10**

**Friday, 28. October 2022***Educational Sessions*

08:45 - 09:45

Room 2

**Educational Session 13: Covid in MS***Chair:* Hans-Peter Hartung, DE*Chair:* Krzysztof Selmaj, PL**Introduction by chairs**

08:45 - 08:50

**Neurological symptoms and management of acute Covid infection in MS patients**

08:50 - 09:05

*Speaker:* Krzysztof Selmaj, PL**Post-Covid neurological symptoms**

09:05 - 09:20

*Speaker:* Hans-Peter Hartung, DE**Covid-induced cognitive residual impairment**

09:20 - 09:35

*Speaker:* Maria Pia Amato, IT**Discussion**

09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 3

**Educational Session 14: Treating NMOSD and MOGAD***Chair:* Jacqueline Palace, GB*Chair:* Kazuo Fujihara, JP**Introduction by chairs**

08:45 - 08:50

O129

**How and when to treat AQP4-IgG-positive NMOSD**

08:50 - 09:05

*Speaker:* Kazuo Fujihara, JP**Treatment approach of antibody negative NMOSD**

09:05 - 09:20

*Speaker:* Jacqueline Palace, GB**MOGAD: its clinical course, MOG-IgG status and therapeutic evidence**

09:20 - 09:35

*Speaker:* Romain Marignier, FR**Discussion**

09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 4

**Educational Session 15: (Micro)-organisms and MS pathogenesis***Chair:* Alberto Ascherio, US*Chair:* Lisa Osborne, CA**Introduction by chairs**

08:45 - 08:50

**EBV, how does it increase the risk of MS?**

08:50 - 09:05

*Speaker:* Alberto Ascherio, US**HERV and the connection with MS**

09:05 - 09:20

	<i>Speaker:</i> Patrick Küry, DE	
O130	<b>Helminths still alive as a MS treatment?</b>	09:20 - 09:35
	<i>Speaker:</i> Lisa Osborne, CA	
	<b>Discussion</b>	09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 5

**Educational Session 16: Biomarkers in MS - from theory to clinical application***Chair:* Fredrik Piehl, SE*Chair:* Philip De Jager, US

	<b>Introduction by chairs</b>	08:45 - 08:50
O131	<b>NfL and other blood biomarkers</b>	08:50 - 09:05
	<i>Speaker:</i> Fredrik Piehl, SE	
O132	<a href="#"><b>Immunoglobulin and other inflammatory markers in the CSF in MS</b></a>	09:05 - 09:20
	<i>Speaker:</i> Luisa María Villar, ES	
	<b>CSF cell profiling in MS: methodology and promises</b>	09:20 - 09:35
	<i>Speaker:</i> Philip De Jager, US	
	<b>Discussion</b>	09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 6

**Educational Session 17: Diagnosis of MS***Chair:* Thomas Berger, AT*Chair:* Per Soelberg Soerensen, DK

	<b>Introduction by chairs</b>	08:45 - 08:50
	<b>Typical clinical MS presentations and possible pitfalls in the diagnosis</b>	08:50 - 09:05
	<i>Speaker:</i> Thomas Berger, AT	
	<b>Atypical clinical syndromes: Diagnostic approach to the right diagnosis</b>	09:05 - 09:20
	<i>Speaker:</i> Georgina Arrambide, ES	
	<b>Early identification of secondary progressive MS</b>	09:20 - 09:35
	<i>Speaker:</i> Jiwon Oh, CA	
	<b>Discussion</b>	09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 7

**Educational Session 18: Next generation neuroimmunology - how new technologies and novel approaches help to understand inflammatory chronic and demyelinating brain disorders in humans***Chair:* Frauke Zipp, DE*Chair:* Heinz Wiendl, DE

	<b>Introduction by chairs</b>	08:45 - 08:50
O133	<b>A primer to use big(ger) data from clinical cohorts and its integration with novel modalities (machine learning continued)</b> <i>Speaker:</i> Sergio E. Baranzini, US	08:50 - 09:05
O134	<b>Disease monitoring modalities and how they can inform about neuroinflammatory disease endophenotypes</b> <i>Speaker:</i> Frauke Zipp, DE	09:05 - 09:20
	<b>How novel technologies can instruct about disease endophenotypes and disease-related compartments</b> <i>Speaker:</i> Heinz Wiendl, DE	09:20 - 09:35
	<b>Discussion</b>	09:35 - 09:45

*Educational Sessions*

08:45 - 09:45

Room 8

**Educational Session 19: Latest updates in management of childbearing in women with MS and NMOSD***Chair:* Kerstin Hellwig, DE*Chair:* Riley Bove, US

	<b>Introduction by chairs</b>	08:45 - 08:50
	<b>Pre-conception care for women with MS and NMOSD: contraception, pregnancy planning, fertility</b> <i>Speaker:</i> Maria K. Houtchens, US	08:50 - 09:05
O135	<b>Pharmacological safety during pregnancy and lactation</b> <i>Speaker:</i> Kerstin Hellwig, DE	09:05 - 09:20
	<b>Care for women with MS and NMOSD in the postpartum period</b> <i>Speaker:</i> Riley Bove, US	09:20 - 09:35
	<b>Discussion</b>	09:35 - 09:45

*Clinical*

10:00 - 11:30

Room 1

**Scientific Session 13: COVID-19 and MS***Chair:* Olga Ciccarelli, GB*Chair:* Helmut Butzkueven, AU

	<b>Introduction by chairs</b>	10:00 - 10:05
O136	<b>Looking back, what have we learnt?</b> <i>Speaker:</i> Celine Louapre, FR	10:05 - 10:20
	<b>COVID-19: vaccination in MS patients</b> <i>Speaker:</i> Anat Achiron, IL	10:20 - 10:35
	<b>Platform presentations of related original papers</b>	10:35 - 10:35
O137	<b>Effectiveness of COVID-19 vaccines in people with multiple sclerosis receiving disease-modifying therapies: a total</b>	10:35 - 10:42

	<b>population study of national health service (NHS) England</b>	
	<i>Speaker:</i> Nikos Evangelou, GB	
O138	<b>Humoral and cellular immune responses after SARS-CoV-2-Vaccination in a Swedish cohort of persons with multiple sclerosis treated with disease modifying therapies</b>	10:42 - 10:49
	<i>Speaker:</i> Monika Rabenstein, SE	
O139	<b>Third dose of SARS-CoV-2 mRNA vaccination in MS patients treated with disease modifying therapies</b>	10:49 - 10:56
	<i>Speaker:</i> Irene Schiavetti, IT	
O140	<b>Impact of COVID-19 on pregnancy and fetal outcomes in women with multiple sclerosis</b>	10:56 - 11:03
	<i>Speaker:</i> Maria Grazia Aprea, IT	
	<b>Discussion</b>	11:03 - 11:30
<i>Clinical</i>		
10:00 - 11:30		
Room 2		
<b>Scientific Session 14: e-Health</b>		
<i>Chair:</i> Letizia Leocani, IT		
<i>Chair:</i> Paul Matthews, GB		
	<b>Introduction by chairs</b>	10:00 - 10:05
	<b>e-Health assessments</b>	10:05 - 10:20
	<i>Speaker:</i> Riley Bove, US	
O141	<b>Electronic health interventions in the case of multiple sclerosis</b>	10:20 - 10:35
	<i>Speaker:</i> Tjalf Ziemssen, DE	
	<b>Platform presentations of related original papers</b>	10:35 - 10:35
O142	<b>Remote observational research for MS: a natural experiment</b>	10:35 - 10:42
	<i>Speaker:</i> Riley Bove, US	
O143	<b>The cognitive fingerprint of multiple sclerosis: large scale online assessment of cognition in the UK MS register</b>	10:42 - 10:49
	<i>Speaker:</i> Annalaura Lerede, GB	
O144	<b>Assessment of upper extremity function and performance fatigability in multiple sclerosis using sensor-based features derived from the smartphone-based pinching test</b>	10:49 - 10:56
	<i>Speaker:</i> Jennifer Graves, US	
O145	<b>Evaluation of spinal cord atrophy using a SIENA-like approach</b>	10:56 - 11:03
	<i>Speaker:</i> Ludovico Luchetti, IT	
	<b>Discussion</b>	11:03 - 11:30



## Therapy

10:00 - 11:30

Room 3

**Scientific Session 15: Global views: Health care access around the globe**

Chair: Mohammad Ali Sahraian, IR

Chair: Alexey Boyko, RU

	<b>Introduction by chairs</b>	10:00 - 10:05
	<b>ECTRIMS: Access to high quality MS healthcare principles</b>	10:05 - 10:15
	Speaker: Maria Pia Amato, IT	
	<b>LACTRIMS: Barriers to the Accessibility and Continuity of Health-Care Services in People with Multiple Sclerosis</b>	10:15 - 10:25
	Speaker: Lorna Galleguillos, CL	
O147	<b>BCTRIMS: Impact of the Covid 19 pandemic on healthcare access for people with MS</b>	10:25 - 10:35
	Speaker: Milena Sales Pitombeira, BR	
	<b>MENACTRIMS: The role of E health technology: opportunities and challenges</b>	10:35 - 10:45
	Speaker: Reem Al Bunyan, SA	
O148	<b>PACTRIMS: Improving care coordination and responsiveness to patients' needs: the power of global collaboration</b>	10:45 - 10:55
	Speaker: Shanthi Viswanathan, MY	
	<b>ACTRIMS: Future perspectives and actions needed</b>	10:55 - 11:05
	Speaker: Emmanuelle Waubant, US	
	<b>Discussion</b>	11:05 - 11:30

## Therapy

10:00 - 11:30

Room 4

**Scientific Session RIMS 3: People with MS at work: the role of vocational rehabilitation**

Chair: Roshan das Nair, NO

Chair: Daphne Kos, BE

	<b>Introduction by chairs</b>	10:00 - 10:05
O149	<b>Optimizing employment and preventing job loss</b>	10:05 - 10:20
	Speaker: Kate Radford, GB	
O150	<b>Vocational rehabilitation interventions: lessons for MS from other health conditions</b>	10:20 - 10:35
	Speaker: Sverker Johansson, SE	
O151	<b>Cognitive-motor interaction: relationship with employment status and negative work events in relapsing-remitting multiple sclerosis</b>	10:35 - 10:42
	Speaker: María Bárbara Eizaguirre, AR	
O152	<b>Longitudinal transitions of employment status after a first episode of CNS demyelination</b>	10:42 - 10:49
	Speaker: Amin Zarghami, AU	

O153	<b>Evaluation of work difficulties in MS subjects and its association with socio-demographic factors and performance measures</b> <i>Speaker:</i> Erica Grange, IT	10:49 - 10:56
O154	<b>Impact of education level on multiple sclerosis disability progression in France</b> <i>Speaker:</i> Mathilde LEFORT, FR	10:56 - 11:03
	<b>Discussion</b>	11:03 - 11:30

*Clinical*

10:00 - 11:00

Room 5

**Hot Topic 8: Pediatric MOGAD***Chair:* Silvia Tenembaum, AR*Chair:* Kumaran Deiva, FR

	<b>Introduction by chairs</b>	10:00 - 10:05
O155	<b>Classification of pediatric MOGAD</b> <i>Speaker:</i> Giulia Fadda, US	10:05 - 10:15
	<b>Imaging and biomarkers in pediatric MOGAD</b> <i>Speaker:</i> Thais Armangue, ES	10:15 - 10:25
	<b>Treatment of pediatric MOGAD</b> <i>Speaker:</i> Rinze Neuteboom, NL	10:25 - 10:35
	<b>Discussion</b>	10:35 - 11:00

*Clinical*

10:00 - 11:00

Room 6

**Meet the Expert 3 Aging: impact on diagnosis and treatment***Chair:* Alan Thompson, GB*Chair:* Bianca Weinstock-Guttman, US*Imaging and non-imaging biomarkers*

10:00 - 11:00

Room 7

**Free Communications 6: Imaging***Chair:* Nicola De Stefano, IT*Chair:* Jiwon Oh, CA

	<b>Introduction by chairs</b>	10:00 - 10:05
O156	<b>Vascular comorbidities are associated with grey matter atrophy in secondary progressive multiple sclerosis</b> <i>Speaker:</i> Nevin Alex John, GB	10:05 - 10:12
O157	<b>Brain MRI enhancement patterns in MOG-IgG-associated disease and comparison to aquaporin-4 antibody positive neuromyelitis optica spectrum disorder and multiple sclerosis</b> <i>Speaker:</i> Paul Elsbernd, US	10:12 - 10:19
O158	<b>SBM detects early volumetric changes among functionally</b>	10:19 - 10:26

	<b>and/or structurally correlated sensorial and motor regions in MS</b> <i>Speaker:</i> Eduardo Caverzasi, US	
O159	<b>Relationship between paramagnetic rim lesions and slowly expanding lesions in people with multiple sclerosis</b> <i>Speaker:</i> Alberto Calvi, GB	10:26 - 10:33
O160	<b>Chronic lesion phenotyping provides a strong predictor for disease progression in multiple sclerosis</b> <i>Speaker:</i> Eero Polvinen, FI	10:33 - 10:40
	<b>Discussion</b>	10:40 - 11:00

*Educational Sessions*

10:00 - 11:00

Room 8

**Educational Session 20: Approaches to alternative treatment algorithms***Chair:* Eva Strijbis, NL*Chair:* Joep Killestein, NL

<b>Introduction by chairs</b>	10:00 - 10:05
<b>Biosimilars and off-label therapies</b> <i>Speaker:</i> Bob van Oosten, NL	10:05 - 10:20
<b>When to stop disease modifying therapy</b> <i>Speaker:</i> Eva Strijbis, NL	10:20 - 10:35
<b>Personalised and extended dosing of monoclonal antibodies</b> <i>Speaker:</i> Joep Killestein, NL	10:35 - 10:50
<b>Discussion</b>	10:50 - 11:00

*Break*

11:30 - 12:00

Room 1

**Coffee Break***Clinical*

12:00 - 13:30

Room 1

**Scientific Session 16: Cognition***Chair:* Dawn Langdon, GB*Chair:* Ralph Benedict, US

	<b>Introduction by chairs</b>	12:00 - 12:05
	<b>Aging in MS and cognition</b> <i>Speaker:</i> Maria Pia Amato, IT	12:05 - 12:20
	<b>Prevention versus treatment</b> <i>Speaker:</i> Hanneke Hulst, NL	12:20 - 12:35
	<b>Platform presentations of related original papers</b>	12:35 - 12:35
O161	<b>Reappraisal of MS cognition in the modern treatment and diagnostic Era: impaired memory despite normal processing</b>	12:35 - 12:42

	<b>speed refutes the entrenched speed-centric framework</b> <i>Speaker:</i> James Sumowski, US	
O162	<b>Distinction of MS-cognitive profiles is associated with fatigue, anxiety and depression status and present different brain atrophy patterns</b> <i>Speaker:</i> Carolina de Medeiros Rimkus, BR	12:42 - 12:49
O163	<b>Cognitive rehabilitation and mindfulness reduce cognitive complaints in multiple sclerosis (REMIND-MS): a randomized controlled trial</b> <i>Speaker:</i> Ilse M. Nauta, NL	12:49 - 12:56
O164	<b>Functional correlates of intelligence quotient and cognitive abilities vary according to maturation in pediatric MS</b> <i>Speaker:</i> Maria Assunta Rocca, IT	12:56 - 13:03
	<b>Discussion</b>	13:03 - 13:30
<i>Imaging and non-imaging biomarkers</i> 12:00 - 13:30		
		Room 2
<b>Scientific Session 17: Blood based biomarkers: when to implement?</b>		
<i>Chair:</i> Eline Willemse, CH		
<i>Chair:</i> Fredrik Piehl, SE		
	<b>Introduction by chairs</b>	12:00 - 12:05
O165	<b>NfL use in clinical practice: normal reference values</b> <i>Speaker:</i> Michael Khalil, AT	12:05 - 12:20
	<b>NfL use in clinical trials: prognostic and outcome measure</b> <i>Speaker:</i> Robert J. Fox, US	12:20 - 12:35
	<b>Platform presentations of related original papers</b>	12:35 - 12:35
O166	<b>Serum glial fibrillary acidic protein compared with neurofilament light chain as biomarker for multiple sclerosis disease progression</b> <i>Speaker:</i> Stephanie Meier, CH	12:35 - 12:42
O167	<b>Serum glial fibrillary acidic protein as a biomarker of disease-progression in a natalizumab-treated cohort of patients with relapsing-remitting multiple sclerosis</b> <i>Speaker:</i> Mark H.J. Wessels, NL	12:42 - 12:49
O168	<b>Serum neurofilament light chain is associated with longitudinal brain atrophy across patient subgroups in MS</b> <i>Speaker:</i> Elias Sotirchos, US	12:49 - 12:56
O169	<b>Longitudinal blood NFL levels are associated with the pattern and timing of progression in multiple sclerosis</b> <i>Speaker:</i> Ahmed Abdelhak, US	12:56 - 13:03
	<b>Discussion</b>	13:03 - 13:30

*Therapy*

12:00 - 13:30

Room 3

**ECTRIMS-EAN Session***Chair:* Bruno Stankoff, FR*Chair:* Paolo A. Muraro, GB

	<b>Introduction by chairs to the ECTRIMS Focused Workshop on HSCT and MS</b>	12:00 - 12:05
O170	<b>Efficacy of HSCT: clinical evidence in relapsing and progressive MS Patients</b> <i>Speaker:</i> Gian Luigi Mancardi, IT	12:05 - 12:15
	<b>When should HSCT be considered in the sequence of possible disease modifying therapies?</b> <i>Speaker:</i> Basil Sharrack, GB	12:15 - 12:25
	<b>Defining the Conditioning regimens and Transplant protocols</b> <i>Speaker:</i> Riccardo Saccardi, IT	12:25 - 12:35
O171	<b>Neurological follow up and management of disease reactivation following aHSCT</b> <i>Speaker:</i> Ellen Iacobaeus, SE	12:35 - 12:45
	<b>Infections and autoimmunity in the context of HSCT : prevention and management</b> <i>Speaker:</i> Varun Mehra, GB	12:45 - 12:55
	<b>Discussion</b>	12:55 - 13:30

*Therapy*

12:00 - 13:00

Room 4

**Hot Topic 9: Pharmacovigilance***Chair:* Jorge Correale, AR*Chair:* Bruce A. Cree, US

	<b>Introduction by chairs</b>	12:00 - 12:05
O172	<b>Long term safety in DMT use</b> <i>Speaker:</i> Renaud Du Pasquier, CH	12:05 - 12:15
O173	<b>Early recognition of CNS complications</b> <i>Speaker:</i> Mike P. Wattjes, DE	12:15 - 12:25
	<b>How to manage CNS complications</b> <i>Speaker:</i> Joep Killestein, NL	12:25 - 12:35
	<b>Discussion</b>	12:35 - 13:00

*Pathogenesis*

12:00 - 13:00

Room 5

**Hot Topic 10: Emerging role of lipids in MS***Chair:* Valbona Mirakaj, DE*Chair:* Gijs Kooij, NL

	<b>Introduction by chairs</b>	12:00 - 12:05
	<b>Lipid metabolism in macrophages directs lesion progression and repair in MS</b>	12:05 - 12:15
	<i>Speaker:</i> Jerome JA Hendriks, BE	
	<b>Oleic acid and restoring Treg function</b>	12:15 - 12:25
	<i>Speaker:</i> David A. Hafler, US	
O174	<b>Lipid metabolism as major determinant of CNS remyelination</b>	12:25 - 12:35
	<i>Speaker:</i> Gesine Saher, DE	
	<b>Discussion</b>	12:35 - 13:00

*Clinical*

12:00 - 13:00

Room 6

**Meet the Expert 4: Preventing misdiagnosis***Chair:* Matilde Inglese, IT*Chair:* Jeffrey Cohen, US*Educational Sessions*

12:00 - 13:00

Room 7

**Educational Session 22: Beyond MS - paraneoplastic syndromes, iatrogenic demyelination and autoimmune encephalitis***Chair:* Amy Kunchok, US*Chair:* Sophie Binks, GB

	<b>Introduction by chairs</b>	12:00 - 12:05
	<b>A practical update: Diagnosis and management of paraneoplastic neurological syndromes</b>	12:05 - 12:20
	<i>Speaker:</i> Maarten Titulaer, NL	
O176	<b>CNS inflammation complicating immunotherapies: A rising spectrum</b>	12:20 - 12:35
	<i>Speaker:</i> Amy Kunchok, US	
	<b>Autoimmune encephalitis</b>	12:35 - 12:50
	<i>Speaker:</i> Sophie Binks, GB	
	<b>Discussion</b>	12:50 - 13:00

*Educational Sessions*

12:00 - 13:00

Room 8

**Educational Session 21: Treatment of progressive MS***Chair:* Ludwig Kappos, CH*Chair:* Benedetta Bodini, FR

	<b>Introduction by chairs</b>	12:00 - 12:05
	<b>Should secondary progressive patients be treated with an S1PR modulator or an anti-CD20 treatment?</b>	12:05 - 12:20
	<i>Speaker:</i> Ludwig Kappos, CH	

	<b>Can progressive patients be monitored by MRI?</b>	12:20 - 12:35
	<i>Speaker:</i> Benedetta Bodini, FR	
O175	<b>Do current treatment options exert a direct neuroprotective effect?</b>	12:35 - 12:50
	<i>Speaker:</i> Jeremy Chataway, GB	
	<b>Discussion</b>	12:50 - 13:00
 <i>Break</i> 13:30 - 14:15		
<b>Lunch Break</b>		Room 1
 <i>Clinical</i> 13:30 - 14:15		
<b>ePoster Tour 5 - Clinical</b>		ePoster Theatre 1
<i>Chair:</i> Bernhard Hemmer, DE		
P039	<b>Repeated forms, testing intervals, and SDMT performance in a large multiple sclerosis dataset</b>	13:30 - 13:35
	<i>Poster Presenter:</i> Tom Fuchs, US	
P049	<b>Longitudinal evolution of progressive multiple sclerosis: deep understanding with machine learning</b>	13:35 - 13:40
	<i>Poster Presenter:</i> Francesca Bovis, IT	
P009	<b>Frequency of NMOSD misdiagnosis in a cohort from Latin America: impact and evaluation of different contributors</b>	13:40 - 13:45
	<i>Poster Presenter:</i> Edgar Carnero Contentti, AR	
P446	<b>Progression independent of relapse activity is the main determinant of disability accumulation in relapsing-onset multiple sclerosis patients</b>	13:45 - 13:50
	<i>Poster Presenter:</i> Emilio Portaccio, IT	
P021	<b>Dynamic MRI lesion evolution in paediatric MOG-Ab associated disease (MOGAD)</b>	13:50 - 13:55
	<i>Poster Presenter:</i> Dimitrios Champsas, GB	
P426	<b>A retrospective investigation of MOG-IgG titers in relapse and disability prediction in adult and pediatric myelin oligodendrocyte glycoprotein antibody-associated disease patients</b>	13:55 - 14:00
	<i>Poster Presenter:</i> Jamie McDonald, US	
P010	<b>Efficacy subgroup analyses from the phase 3 CHAMPION-NMOSD trial in adults with anti-aquaporin-4 antibody-positive neuromyelitis optica spectrum disorder</b>	14:00 - 14:05
	<i>Poster Presenter:</i> Sean Pittock, US	
P005	<b>Change in AQP4-IgG serostatus in NMOSD: a laboratory-based analysis of 1000 patients with serial collections</b>	14:05 - 14:10
	<i>Poster Presenter:</i> Amy Kunchok, US	
P410	<b>Population-based mortality data of the Danish nationwide AQP4</b>	14:10 - 14:15

**antibody-seropositive NMOSD cohort***Poster Presenter:* Viktoria Papp, DK*Pathogenesis*

13:30 - 14:15

ePoster Theatre 2

**ePoster Tour 6 - Pathogenesis***Chair:* Hans Lassmann, AT

P140	<b>Cellular signature changes in non-lesional tissue from multiple sclerosis donors revealed by single-nucleus RNA-seq and spatial transcriptomics</b> <i>Poster Presenter:</i> Matti Lam, US	13:30 - 13:35
P525	<b>Neuronal loss in the thalamus and pons correlates with disease severity: Interim analysis of a large digital pathology study</b> <i>Poster Presenter:</i> Benjamin COOZE, GB	13:35 - 13:40
P181	<b>Intranasal administration allows rapid transport of anti-Nogo-A antibody and cell signaling modulation in the CNS of EAE mice</b> <i>Poster Presenter:</i> Sebastian Spiegel, CH	13:40 - 13:45
P566	<b>Differential methylation mediates significant proportions of environmental and lifestyle factors' associations with MS risk: results from the Ausimmune case-control study</b> <i>Poster Presenter:</i> Steve Simpson-Yap, AU	13:45 - 13:50
P546	<b>Upregulated complement receptors correlate with Fc gamma receptor 3A-positive natural killer cells and natural killer-T cells in neuromyelitis optica spectrum disorder</b> <i>Poster Presenter:</i> Shuhei Nishiyama, US	13:50 - 13:55
P136	<b>Aquaporin-4 prevents exaggerated astrogliosis and structural damage in retinal inflammation</b> <i>Poster Presenter:</i> Ali Afzali, DE	13:55 - 14:00
P179	<b>Women have higher brain reserve against functional decline in MS than men</b> <i>Poster Presenter:</i> Victoria Leavitt, US	14:00 - 14:05
P538	<b>Functional epigenetic networks are associated with multiple sclerosis</b> <i>Poster Presenter:</i> Alexandre Xavier, AU	14:05 - 14:10
P547	<b>Aggressive multiple sclerosis shows an increase in a peripheral cytotoxic CD8+ T cell subset through single-cell RNA sequencing</b> <i>Poster Presenter:</i> Sita Shah, FR	14:10 - 14:15

*Imaging and non-imaging biomarkers*

13:30 - 14:15

ePoster Theatre 3

**ePoster Tour 7 - Imaging and non-imaging biomarkers**

P185	<b>Diagnostic performance of central vein sign versus oligoclonal bands for multiple sclerosis</b>	13:30 - 13:35
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	<i>Poster Presenter:</i> Karlo Toljan, US	
P251	<b>Investigation of serum based proteomic biomarker signatures relative to steroid responsiveness and disease activity status in relapsing multiple sclerosis patients</b> <i>Poster Presenter:</i> Ferhan Qureshi, US	13:35 - 13:40
P587	<b>Regional altered diffusion in lesional and normal-appearing cortex is linked to cognitive impairment in multiple sclerosis</b> <i>Poster Presenter:</i> Eva A. Krijnen, NL	13:40 - 13:45
P240	<b>Prognostication of disease activity in multiple sclerosis using retinal layer thickness z-scores</b> <i>Poster Presenter:</i> Ting-Yi Lin, DE	13:45 - 13:50
P640	<b>Vitreomacular interface abnormalities in multiple sclerosis; a novel signature of disability</b> <i>Poster Presenter:</i> Hussein Moussa, US	13:50 - 13:55
P589	<b>Multiparametric quantitative MRI for Brain microstructural tissue characterization in multiple sclerosis</b> <i>Poster Presenter:</i> Henri Trang, DE	13:55 - 14:00
P667	<b>Serum neurofilament light chain and subcortical atrophy in a large population of people with multiple sclerosis</b> <i>Poster Presenter:</i> Kathryn Fitzgerald, US	14:00 - 14:05
P632	<b>Linking cortical demyelination to changes in brain metabolism in multiple sclerosis: a 7T MR spectroscopy study</b> <i>Poster Presenter:</i> Mads Alexander Just Madsen, DK	14:05 - 14:10
P190	<b>Lesion evolution on MRI in multiple sclerosis with separation of myelin and iron</b> <i>Poster Presenter:</i> Ziyang Zhu, CA	14:10 - 14:15
<i>Therapy</i> 13:30 - 14:15		
		ePoster Theatre 4
<b>ePoster Tour 8 - Therapy</b>		
P761	<b>Ecilizumab use in neuromyelitis optica spectrum disorders: real-world evidence from Germany and Austria</b> <i>Poster Presenter:</i> Marius Ringelstein, DE	13:30 - 13:35
P684	<b>NEDA-4 with ublituximab versus teriflunomide in the ULTIMATE I and II studies in participants with relapsing multiple sclerosis</b> <i>Poster Presenter:</i> Enrique Alvarez, US	13:35 - 13:40
P768	<b>Horizontal versus vertical switch of treatment in patients with relapsing-remitting multiple sclerosis in Austria</b> <i>Poster Presenter:</i> Michael Guger, AT	13:40 - 13:45
P752	<b>Assessing treatment response to oral drugs for multiple sclerosis in real world setting: a MAGNIMS study</b> <i>Poster Presenter:</i> Serena Ruggieri, IT	13:45 - 13:50

P709	<b>Effect of SARS-CoV-2 vaccination on natural killer cell responses in multiple sclerosis</b> <i>Poster Presenter:</i> Alice Laroni, IT	13:50 - 13:55
P286	<b>Autologous hematopoietic stem cell transplantation in relapsing remitting multiple sclerosis patients: ? single centre experience</b> <i>Poster Presenter:</i> Sofia Mavromati, SE	13:55 - 14:00
P362	<b>Natalizumab treatment of multiple sclerosis in Denmark — a nationwide study with 14 years of follow-up</b> <i>Poster Presenter:</i> Mathias Due Buron, DK	14:00 - 14:05
P287	<b>Cladribine and pregnancy in women with multiple sclerosis – a case series from Germany</b> <i>Poster Presenter:</i> Kerstin Hellwig, DE	14:05 - 14:10
P755	<b>Soluble vascular cell adhesion molecule-1 and natalizumab plasma concentration as potential biomarkers for monitoring treatment of multiple sclerosis patients with natalizumab</b> <i>Poster Presenter:</i> Michael Auer, AT	14:10 - 14:15

*Satellite Symposium*  
14:15 - 15:15

Room 1

### Satellite Symposium 11

*Satellite Symposium*  
14:15 - 15:15

Room 2

### Satellite Symposium 12

*Late Breaking Abstracts*  
15:30 - 16:30

Room 1

### Scientific Session 18: Late Breaking Abstracts

*Chair:* Mar Tintoré, ES

*Chair:* Tobias Derfuss, CH

	<b>Introduction by chairs</b>	15:30 - 15:35
O177	<b>Predictive sNfL Z score cut-offs in MS vary depending on the outcome and may help increase diagnostic specificity at the expense of sensitivity in CIS patients not fulfilling McDonald MS at baseline</b> <i>Speaker:</i> Georgina Arrambide, ES	15:35 - 15:35
O178	<b>Early non-disabling relapses are associated with a higher risk of disability accumulation in people with relapsing-remitting multiple sclerosis</b> <i>Poster Presenter:</i> Cyrus Daruwalla, GB	15:35 - 15:35
O179	<b>Multi-center, randomized, double-blinded assessment of dimethyl fumarate in extending the time to a first clinical demyelinating event in radiologically isolated syndrome (ARISE)</b> <i>Poster Presenter:</i> Darin Okuda, US	15:35 - 15:35

O180	<b>A non-inferiority study of rituximab versus ocrelizumab in relapsing-remitting multiple sclerosis</b> <i>Poster Presenter:</i> Izanne Roos, AU	15:35 - 15:35
O181	<b>Effectiveness of autologous haematopoietic stem cell transplantation in comparison with natalizumab in progressive MS</b> <i>Poster Presenter:</i> Tomas Kalincik, AU	15:35 - 15:35
O182	<b>Broader Epstein-Barr virus-specific T-cell receptor repertoire in patients with multiple sclerosis</b> <i>Poster Presenter:</i> Tilman Schneider-Hohendorf, DE	15:35 - 15:35
	<b>Discussion</b>	15:35 - 15:48
<i>Break</i> 16:30 - 17:00		
	<b>Coffee Break</b>	Room 1
<i>Plenary Sessions</i> 17:00 - 18:00		
	<b>Plenary Session 2: Closing Session</b>	Room 1
	<i>Chair:</i> Maria Pia Amato, IT <i>Chair:</i> Mar Tintoré, ES <i>Chair:</i> Bernard Uitdehaag, NL	
	<b>Introduction by chairs</b>	17:00 - 17:05
	<b>Presentation of ECTRIMS Awards, RIMS Awards, MSIF Award and ECTRIMS-ECF Award as well announcement of ECTRIMS Honorary Members</b>	17:05 - 17:15
	<b>Confavreux Lecture: The future of neuropathology in MS</b> <i>Speaker:</i> Christine Stadelmann-Nessler, DE	17:15 - 17:35
	<b>Clinical highlights</b> <i>Speaker:</i> Celia Oreja-Guevara, ES <i>Speaker:</i> Heinz Wiendl, DE	17:35 - 17:45
	<b>Scientific highlights</b> <i>Speaker:</i> Elga de Vries, NL <i>Speaker:</i> Anne-Katrin Pröbstel, CH	17:45 - 17:55
	<b>Welcome to MSMilan2023</b> <i>Speaker:</i> Massimo Filippi, IT	17:55 - 18:00