

# Preliminary Scientific Program 15<sup>th</sup> ISNI Congress, Virtual November 8 – 12, 2021

# DAY I | MONDAY NOVEMBER 8

# GSNI | 10:30-6:00 - ALL TIMES IN GMT

Chairs: Gianvito Martino	Chairs: Gianvito Martino (Italy) & V. Wee Yong (Canada)		
10:30 AM-10:45 AM:	<b>Opening Remarks</b> Gianvito Martino ( <i>San Raffaele Hospital Milan, Italy</i> ) & V. Wee Yong ( <i>University of Calgary,</i>		
	Canada)		
10:45 AM-11:30: AM	Autoantibodies in neuroimmunology		
	Russell Dale (University of Sydney, Australia)		
11:30 AM-11:45 AM:	Break		
11:45 AM-12:30 PM:	Microglia in brain injury		
	Jana Vukovic (University of Queensland, Australia)		
12:30 PM-1:15 PM:	Gut dysblosis and neuroimmunology Sachiko Miyake (Juntendo University Graduate School of Medicine, Japan)		
1:15 PM-1:30 PM:	Break		
1:30 PM-2:15 PM:	Neuroimmunology of stroke		
	Marco Bacigaluppi (San Raffaele Milano, Italy)		
2:15 PM-3:00 PM:	Neuroimmunology of neuropathic pain		
	Willias Masocha (Kuwait University, Kuwait)		
3:00 PM-3:15 PM:	Break		
3:15 PM-4:00 PM:	<b>Neuroimmunology of remyelination</b> Tanja Kuhlmann (University of Münster, Germany)		
4:00 PM-4:45 PM:	Neuroimmunology of behavior and stress		
	Staci Bilbo (Duke University, USA)		
4:45 PM-5:00 PM:	Break		
5:00 PM-5:45 PM:	COVID19 neuroimmunology Catherine Larochelle (Université de Montréal, Canada)		
5:45 PM-6:00 PM:	Closing Remarks		



Gianvito Martino (San Raffaele Hospital Milan, Italy) & V. Wee Yong (University of Calgary, Canada)

# DAY II | TUESDAY NOVEMBER 9 – ALL TIMES IN GMT

### WELCOME REMARKS | 10:00 AM -10:30 AM

Welcome

#### PLENARY SESSION | 10:30 AM -12:00 PM

#### Plenary I: Neuroimmunology of CNS demyelinating disorders

Chairs: Samia Khoury (Lebanon) & David Laplaud (France)

10:30 AM-11:00 AM:	Functional involvement of the HLA-DR15 haplotype in the autoimmune pathogenesis of MS Roland Martin (University of Zurich, Switzerland)
11:00 AM-11:30 AM:	The T cell-Phagocyte Interface in Neuroinflammation Burkhard Becher (University of Zurich, Switzerland)
11:30 AM-12:00 PM:	Role of the inflammasome in MS Manuel Comabella (Vall d'Hebron University Hospital, Spain)

BREAK 12:00 PM - 12:15 PM

### INDUSTRIAL SYMPOSIUM | 12:15 PM-1:15 PM

Sanofi Symposium

#### BREAK 1:15 PM – 1:30 PM

### PLENARY SESSION | 1:30 PM-3:00 PM

#### Plenary II: Brain-Immune system interactions in physiological conditions

**Chairs:** Sonia Garel (*France*) & Jon Laman (*Netherlands*)

 1:30 PM-2:00 PM: Single-cell clonotype tracing of encephalitogenic T cells Vijay Kuchroo (*Harvard Medical School, USA*)
 2:00 PM-2:30 PM: Anticipating pathogen invasion: Neuroimmune activation preserves gut homeostasis Gabrielle Belz (*The University of Melbourne, Australia*)



2:30 PM-3:00 PM:

**Dissecting functions of Microglia and non-parenchymal CNS macrophages** Steffen Jung (*Weizmann Institute of Science, Israel*)

### BREAK 3:00 PM – 3:15 PM

# KEYNOTE LECTURE | 3:15 PM-4:15 PM

### The Newsom-Davis Lecture

<u>Chair:</u> Amit Bar-Or *(USA)* Immune mechanisms in neurologic disease Howard Weiner *(Harvard Medical School, USA)* 

### BREAK 4:15 PM – 4:30 PM

# PARALLEL SYMPOSIA | 4:30 PM-6:30 PM

#### Symposium I: Dialog between astrocytes and microglia in neuroimmunology

Chair: Ari Waisman (Germany)

4:30 PM-4:55 PM:	Microglia in early brain wiring: from circuit assembly to tissue integrity Sonia Garel (Université Paris, France)
4:55 PM-5:10 PM:	59-Astrocyte-Oligodendrocyte interaction drives central nervous system remyelination Irene Molina Gonzalez (University of Eidenburgh, UK)
5:10 PM-5:35 PM:	Regulation of CNS Macrophages in Health and Disease Melanie Greter (University of Zurich, Switzerland)
5:35 PM-5:50 PM:	249-APOE4 IMPAIRS MICROGLIA RESPONSE TO NEURODEGENERATION IN ALZHEIMER'S DISEASE Neta Rosenzweig (Brigham and Women's Hospital, Harvard Medical School, USA)
5:50 PM-6:15 PM:	Astrocyte heterogeneity in Multiple Sclerosis Francisco Quintana (Harvard Medical School, USA)
6:15 PM-6:30 PM:	308-Selective inhibition of soluble TNF promotes beneficial neuroinflammatory responses and remyelination in the cortical grey matter. Athena Boutou & Ilias Roufagalas ( <i>Hellenic Pasteur Institute, Greece</i> )

### Symposium II: Parasites and neuroinflammation

Chair: Nicolas Blanchard (France)

4:30 PM-4:55 PM: A conserved GABAergic system in mononuclear phagocytes -implications for infection Antonio Barragan (Stockholm University, Sweden)







4:55 PM-5:10 PM:	246-Studying the mechanisms of neuroinflammation-induced cognitive alterations associated with Toxoplasma gondii infection Marcy Belloy (University of Toulouse, France)
5:10 PM-5:35 PM:	<b>TBD</b> William Heath ( <i>The University of Melbourne, Australia</i> )
5:35 PM-5:50 PM:	108-Regional cyst localisation and innate immune activation of the retina and brain in murine toxoplasmosis. Dana Lee (Queensland University of Technology, Australia)
5:50 PM-6:15 PM:	Mechanisms of fatal blood barrier dysfunction during cerebral malaria Dorian McGavern ( <i>NIH, USA</i> )

# Symposium III: Antibody-mediated diseases: new targets and new mechanisms

Chairs: Laurent Groc (France) & Jérôme Honnorat (France)		
4:30 PM-4:55 PM:	The different syndromes and mechanisms of neuronal synaptic autoantibodies Josep Dalmau (ICREA-IDIBAPS, Spain)	
4:55 PM-5:10 PM:	<b>191-Immunogenetics in autoimmune encephalitis and related disorders</b> Sergio Muniz-Castrillo ( <i>Hospices Civils de Lyon, Hôpital Neurologique, France</i> )	
5:10 PM-5:35 PM:	The peculiar features of IgG4 and its role in autoimmune diseases Maartje Huijbers (Leiden University Medical Center, the Netherlands)	
5:35 PM-5:50 PM:	259-The role of SWAP-70 and FCRL2 in pathophysiology of multiple sclerosis and their value as biomarker Elif Sanli (Istanbul University, Turkey)	
5:50 PM-6:15 PM:	Autoimmune encephalitis and epilepsy Maarten Titulaer (Erasmus MC University Medical Center, the Netherlands)	
6:15 PM-6:30 PM:	<b>131-Clinical and laboratory features in anti-NF155 autoimmune nodopathy</b> Lorena Martin-Aguilar (University of Vienna, Austria)	

### BREAK 6:30 PM – 6:45 PM

# WORKSHOPS | 6:45 PM-8:45 PM

### Workshop I: Innate and Adaptive Immunity in AD, Parkinson and ALS

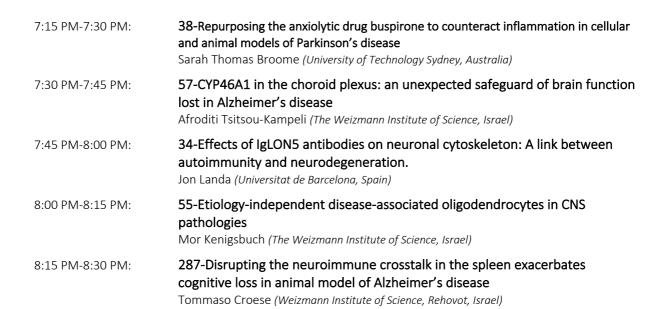
**Chairs:** Stéphane Hunot (France)

6:45 PM-7:15 PM: Lymphocyte trafficking to the CNS – does provenance matter? Thomas Korn (*Klinikum rechts der Isar Technische Universität München, Germany*)





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### Workshop II: Modeling neuroinflammation using IPSC, organoids and animal models

Chairs: Sandra Amor (Netl	herlands) & Lennart Mars (France)
6:45 PM-7:15 PM:	Th17 lymphocyte-induced neuronal cell death in Parkinson's disease Iryna Prots (University Hospital Erlangen, Germany)
7:15 PM-7:30 PM:	375-Human induced pluripotent stem cells-derived neurons to study CNS- reactive autoantibodies in COVID-19-mediated neurological syndromes Amandine Mathias (Lausanne University Hospital and Lausanne University, Switzerland)
7:30 PM-7:45 PM:	<b>176-Human in vitro model to study the role of glial cells in multiple sclerosis</b> Sanna Hagman ( <i>Tampere University, Finland</i> )
7:45 PM-8:00 PM:	<b>185-Intrinsic regulation of Th17 cell pathogenicity by IL-24</b> Christopher Sie ( <i>Technical University of Munich, Germany</i> )
8:00 PM-8:15 PM:	<b>90-Decline of Neural Stem Cell Resilience in Multiple Sclerosis</b> Alexandra M. Nicaise ( <i>University of Cambridge, UK</i> )
8:15 PM-8:30 PM:	184-Regulatory B cells required IL-2 signaling to control disease severity in EAE Juliette Gauthier (University of Rennes, France)
8:30 PM-8:45 PM:	356-Using hiPSC-derived CNS cells as antigen presenting cells for unbiased identification of CNS-autoreactive CD8+ T cells Sylvain Perriot (Lausanne University Hospital, Switzerland)



# Workshop III: Single cell analyses in neuroimmunology: essential or overrated?

**<u>Chair:</u>** Rejane Rue (*France*) & Simon Fillatreau (*France*)

18:45-19:15:	Oligodendroglia cell states in multiple sclerosis: insights from single-cell transcriptomics and epigenomics Gonçalo Castelo-Branco (Karolinska Institutet, Sweden)
19:15-19:30:	<b>304-Antibody-mediated diseases: new targets and new mechanisms</b> Alicia Zou (University of Sydney, Australia)
19:30-19:45:	363-Single-cell transcriptome profiling revealed the distinct transcriptional response of microglia-like cells during herpes simplex encephalitis Olus Uyar (Université Laval, Canada)
19:45-20:00:	<b>54-Exploring reported genes of microglia RNA-seq studies: uses and considerations</b> Techla van Wageningen ( <i>Amsterdam UMC, the Netherlands</i> )
20:00-20:15:	298-Diverse human astrocyte and microglial transcriptional responses to Alzheimer's pathology Amy Smith (University of Auckland, New Zealand)
20:15-20:30:	200-CXCR4-positive T cells are increased in people with radiologically isolated syndrome Raphael Schneider (Keenan Research Center for Biomedical Science, Canada)
20:30-20:45:	225-CanProCo study; Determining technical parameters for large scale single-cell RNA sequencing of MS patients Fiona Tea (CrCHUM, Canada)

# Workshop IV: Immunomodulation and remyelination

Chairs: Violetta Zujovic (	France) & Abdelhadi Saoudi (France)
6:45 PM-7:15 PM:	<b>Promoting macrophage/microglia activity for remyelination</b> V. Wee Yong (University of Calgary – Canada)
7:15 PM-7:30 PM:	187-TNFR2 regulates the response of oligodendrocyte precursor cells to neuroinflammation Haritha Desu (University of Miami, USA)
7:30 PM-7:45 PM:	<b>17-Targeting lipophagy in macrophages improves repair in multiple sclerosis</b> Melanie Loix ( <i>Hasselt University, Belgium</i> )
7:45 PM-8:00 PM:	61-Exogenous fractalkine enhances oligodendrogenesis and remyelination in the cuprizone-induced demyelination mouse model Monique Marylin Alves de Almeida (University of Alberta, Canada)
8:00 PM-8:15 PM:	<b>123-Stearoyl-CoA desaturase-1 impairs the reparative properties of</b> <b>macrophages and microglia in the brain</b> Jeroen F.J. Bogie ( <i>Hasselt University, Belgium</i> )



8:15 PM-8:30 PM:	220-Themis1/Vav1 signaling hub controls T cell pathogenicity in a mouse model of Multiple Sclerosis Rémi Marrocco (INFINITY, France)
8:30 PM-8:45 PM:	65-Elevated expression levels of Ephrins on Immune Cells of Patients With Multiple Sclerosis Affects Oligodendrocyte Differentiation Maya Golan (Tel Aviv Sourasky Medical Center, Israel)

# DAY III | WEDNESDAY NOVEMBER 10 – ALL TIMES IN GMT

### POSTER SESSION | 10:30 AM-12:30 PM

Posters

BREAK 12:30 PM – 12:45 PM

INDUSTRIAL SYMPOSIUM | 12:45 PM-1:45 PM

**BMS/Celgene Symposium** 

# BREAK 1:45 PM – 2:00 PM

### PLENARY SESSION | 2:00 PM-3:30 PM

#### Plenary III: Neuroimmunology of neurodegenerative diseases and ageing

Chairs: Shohreh Issaza	deh-Navikas (Denmark) & Guillaume Dorothée (France)
2:00 PM-2:30 PM:	<b>TBD</b> Jordi Bové ( <i>Vall d'Hebron, Spain</i> )
2:30 PM-3:00 PM:	Systemic blockade of anti-PD-I1 can potentially overcome Trem2 polymorphism in combating Alzheimer's disease Michal Schwartz (Weizmann Institute of Science, Israel)
3:00 PM-3:30 PM:	<b>TBD</b> Marco Colonna (Washington University School of Medicine St. Louis, USA)

BREAK 3:30 PM – 3:45 PM





# PARALLEL SYMPOSIA | 3:45 PM-5:45 PM

# Symposium IV: Barriers of the CNS: actors in neuroinflammation

<u>Chairs:</u> Catharina C. Gross 3:45 PM-4:10 PM:	(Germany) & Julie Ribot (Portugal) Regulation of the blood-brain barrier in health and disease Richard Daneman (University of California San Diego – USA)
4:10 PM-4:25 PM:	282-DICAM Promotes TH17 Lymphocyte Trafficking Across the Blood-Brain Barrier during Neuroinflammation Marc Charabati (Centre de Recherche du Centre Hospitalier de l'Université de Montréal (CRCHUM)/Université de Montréal, Canada)
4:25 PM-4:50 PM:	Modelling T-cell autoimmunity of the CNS grey and white matter Francesca Odoardi (University Medical Center Göttingen – Germany)
4:50 PM-5:05 PM:	157-Immune protection at the CNS borders: heterogeneity and maturation of meningeal macrophages Elisa Eme-Scolan (Immunology Center of Marseille-Luminy, France)
5:05 PM-5:30 PM:	Unbiased and large-scale CNS endothelium transcriptomic analyses in human and mouse Alexandre Prat (Université de Montréal – Canada)
5:30 PM-5:45 PM:	<b>311-B cells and their progenitors reside in non-diseased meninges</b> David Schafflick (University Hospital Münster, Germany)

# Symposium V: Autoimmune neurological disorders (other than MS)

Chair: Patrick Vermersch	n (France)
3:45 PM-4:10 PM:	Neuromyelitis optica spectrum disorders: Pathobiology predicts treatment response for AQP4-IgG-associated subtype Brian Weinshenker (Mayo Clinic – USA)
4:10 PM-4:25 PM:	<b>71-T cell-mediated neuronal destruction in GAD65-Encephalitis calls for early immunosupressive treatment</b> Anna R. Tröscher ( <i>Mecial University of Vienna, Austria</i> )
4:25 PM-4:50 PM:	<b>Brain control of adaptive immunity</b> Hai Qi ( <i>Tsinghua University – China</i> )
4:50 PM-5:05 PM:	231-CX3CR1 but not CCR2 expression is required for the development of autoimmune peripheral neuropathy in mice Oladayo Oladiran (The alan Edwrds Centre for Research on Pain, Canada)
5:05 PM-5:30. PM:	<b>New aspects of autoimmune neuromuscular junction disorders</b> Angela Vincent ( <i>University of Oxford – UK</i> )







5:30 PM-5:45 PM:

281-Investigating anti-inflammatory and immunomodulatory properties of brivaracetam in experimental autoimmune encephalomyelitis (EAE) Oumarou Ouédraogo (CHUM research Center, Canada)

### Symposium VI: Viruses and neuroinflammation

<u>Chairs:</u> Daniel Gonzalez-Dunia (France) & Trevor Owens (Denmark)		
3:45 PM-4:10 PM:	Innate immune mechanisms of pathological forgetting Robyn Klein (Washington University School of Medicine St. Louis – USA)	
4:10 PM-4:25 PM:	127-MAVS is required to mount IFN-β- and broad innate immune responses in VSV infected microglia Olivia Luise Gern (Hannover Medical School and the Helmhotz Centre for Infection Research, Germany)	
4:25 PM-4:50 PM:	Epstein-Barr virus and multiple sclerosis: from autoimmunity to virus-induced immunopathology? Francesca Aloisi <i>(Istituto Superiore di Sanità – Italy)</i>	
4:50 PM-5:05 PM:	<b>156-Age-dependent meningeal macrophages protect against viral</b> <b>neuroinfection</b> Rejane Rua (Immunology Center of Marseille-Luminy, France)	
5:05 PM-5:30 PM:	Disentangling pathological and protective T cell responses in the CNS Doron Merkler (Université de Géneve – Switzerland)	
5:30 PM-5:45 PM:	52-Human iPSC-derived astrocytes as a model to understand JCV infection in the brain Larise Oberholster (Lausanne University Hospital, Switzerland)	

BREAK 5:45 PM – 6:00 PM

# KEYNOTE LECTURE | 6:00 PM-7:00 PM

#### The Immunology Lecture

**<u>Chair:</u>** Gianvito Martino (*Italy*)

Unraveling the Complex Pathogenesis of Multiple Sclerosis Using Animal Models Joan Goverman (University of Washington – USA)

BREAK 7:00 PM - 7:15 PM





# PARALLEL WORKSHOPS | 7:15 PM-9:15 PM

# Workshop V: Does our food affect our brain via the immune system?

<u>Chairs:</u> Caroline Pot <i>(Switz</i> 7:15 PM-7:45 PM:	zerland) & Guy Gorochov (France) Diet and the gut microbiome shape the course of multiple sclerosis Aiden Haghikia (Ruhr-Universität – Germany)
7:45 PM-8:00 PM:	62-Diet-dependent regulation of TGFb impairs reparative innate immune responses after demyelination M. Bosch Queralt (Technical University Munich, Germany)
8:00 PM-8:15 PM:	56-Sialic acid-driven untimely immune aging in obesity-Alzheimer's disease comorbidity accelerates cognitive decline Stefano Suzzi (The Weizmann Institute of Science, Israel)
8:15 PM-8:30 PM:	140-Neurological alterations and intestinal dysbiosis associated with subclinical food allergy Kumi Nagamoto-Combs (University of North Dakota School of Medicine, USA)
8:30 PM-8:45 PM:	171-Impact of methionine intake on neuroinflammatory processes in a spontaneous sex-biased animal model of multiple sclerosis Victoria Hannah Mamane (Université de Montréal, Canada)
8:45 PM-9:00 PM:	115-Dietary supplementation with conjugated linoleic acid ameliorates intestinal inflammation and CNS autoimmunity Ann-Katrin Fleck (University of Münster, Germany)
9:00 PM-9:15 PM:	289-Impact of high fibre diet and its combination with intermittent fasting in CNS autoimmunity Eileen Liao (The University of Sydney, Australia)

# Workshop VI: Brain ageing: impact of immunity and infection

Chair: Serge Nataf (France	2)
7:15 PM-7:45 PM:	Uncovering immune responses driving cellular communities towards proteinopathy and cognitive decline in 1.6 million individual transcriptomes Philip De Jager (Columbia University, USA)
7:45 PM-8:00 PM:	<b>110-Aging perturbs microglia function and upregulates osteopontin to accelerate oxidized phosphatidylcholine-mediated neurodegeneration</b> Jeff Dong ( <i>University of Calgary, Canada</i> )
8:00 PM-8:15 PM:	136-Aging blood factors promote CD8 T cell infiltration in the adult mouse brain Lynn van Olst (Amsterdam UMC, the Netherlands)







8:15 PM-8:30 PM:	248-Towards manipulating microglial subsets in humans: an approach to polarize microglia in a targeted fashion Verna Haage (Columbia University Irving Medical Center, USA)
8:30 PM-8:45 PM:	328-Aged CNS-resident cells promote a non-remitting course of experimental autoimmune encephalomyelitis Jeffrey Atkinson (The Ohio State University, USA)
8:45 PM-9:00 PM:	267-Ageing promotes non-remitting experimental autoimmune encephalomyelitis with persistent meningeal inflammation and subpial demyelination in SJL/J mice Michelle Zuo (University of Toronto, Canada)
9:00 PM-9:15 PM:	<b>307-Chronic demyelination-induced cell senescence is associated with motor impairment in a model of MS</b> Irini Papazian (Hellenic Pasteur Institute, Greece)

# Workshop VII: Neuroimmunology of the eye and the optic nerve

Chairs: Cécile Delarasse (France) & Sylvain Fisson (France)

7:15 PM-7:45 PM:	Microbiota and the eye – is there a gut-eye axis? Rachel Caspi (National Eye Institute, NIH – USA)
7:45 PM-8:00 PM:	150-T cells in NMOSD patients – insights from the peripheral blood and the CSF Maren Lindner (University Hospital Münster, Germany)
8:00 PM-8:15 PM:	254-The early emergence of aquaporin 4-specific B cells characterises neuromyelitis optica spectrum disorders Sudarshini Ramanathan (John Radcliffe Hospital; University of Oxford, Oxford, UK/ University of Sydney; Kids Neuroscience Centre, Children's Hospital at Westmead, Australia/ Concord Hospital, Australia)
8:15 PM-8:30 PM:	201-Aberrant DNA methylation of Runx1 promotes Th17 induced autoimmunity in Neuromyelitis Optica Spectrum Disorders Yuhan Qiu (West China Hospital of Sichuan University, China)
8:30 PM-8:45 PM:	73-ATP mediates neuropathic pain in neuromyelitis optica via microglial activation Teruyuki Ishikura (Osaka University, Japan)
8:45 PM-9:00 PM:	377-Subretinal Associated Immune Inhibition, a new antigen-specific immunosuppressive mechanism in the context of AAV gene transfer Sylvain Fisson (Université Paris Saclay)
9:00 PM-9:15 PM:	<b>162-Role of P2X7 receptor in mouse experimental autoimmune uveitis (EAU)</b> Cécile Delarasse (Institut de la Vision, France)





# Workshop VIII: Sex chromosomes and hormones in neuroimmunology

Chair: Sophie Laffont (Fra	nce)
7:15 PM-7:45 PM:	<b>Sex Chromosome Effects on Autoimmunity</b> Rhonda Voskuhl ( <i>UCLA Multiple Sclerosis Program – USA</i> )
7:45 PM-8:00 PM:	276-In utero exposure to maternal Anti-Caspr2 antibodies alters microglial activation and development in male offspring Ben Spielman (The Feinstein Institutes for Medical Research)
8:00 PM-8:15 PM:	67-Suppression of the disease-relevant brain-homing T cell in MS by nuclear receptor crosstalk Steven C. Koetzier ( <i>Erasmus MC, University Medical Center</i> )
8:15 PM-8:30 PM:	<b>116-Regulatory T cells contribute to sexual dimorphism in neonatal hypoxic- ischemic brain injury</b> Josephine Herz ( <i>University Hospital Essen, University Duisburg-Essen</i> )
8:30 PM-8:45 PM:	290-Protective Efficacy of Genistein And 17β Estradiol Against Amyloid Beta Neurotoxicity In Aging Female Rats Pardeep Kumar (Jawaharlal Nehru University, India)
8:45 PM-9:00 PM:	133-CD300f immune receptor contributes to healthy aging by regulating inflammaging, metabolism and cognitive decline Hugo Peluffo (UDELAR, Institut Pasteur de Montevideo, Uruguay)

# DAY IV | THURSDAY NOVEMBER 11

# PARALLEL WORKSHOPS | 10:30 AM-12:30 PM

#### Workshop IX: Behavior and immunity

Chairs: Asya Rolls (Israel)	
10:30 AM-11:00 AM:	Neuroimmune interactions in the skin, from molecular mechanisms to therapeutic perspectives Sophie Ugolini (Parc Scientifique et technologique de Luminy, France)
11:00 AM-11:15 AM:	203-Prolonged T cell expansion in neurological manifestations associated with COVID-19 I-Na Lu (University Hospital Münster, Germany)
11:15 AM-11:30 AM:	42-Brain-Immune Axis Regulation is Responsive to Cognitive Behavioral Therapy and Mindfulness Intervention in Crohn's Disease patients Ilan Karny (Ben-Gurion University of the Negev, Israel)





11:30 AM-11:45 AM:	92-The modulatory effect of melatonin on the behavior in rats under experimental conditions of inflammation models Asiance Tchang (Samara University, Russian Federation)
11:45 AM-12:00 PM:	222-Role of meninges in activity-induced neurogenesis Mathilde Marin Immunology Center of Marseille-Luminy, France)
12:00 PM-12:15 PM:	277-Deleterious role of microgliosis after perinatal cerebellar injury on anxious behaviors in adult mice Eloi Guarnieri (Université de Montréal, Canada)
12:15 PM-12:30 PM:	122-Cytotoxic NK-like CD8+T cells, the reservoir of clonal cells, are related to disease activity in MS Emilie Dugast (CRTI-INSERM U1064, France)

# Workshop X: The sensory and autonomic nervous systems: links with inflammation

<b><u>Chairs:</u></b> Nicolas Gaudenz	<u>Chairs:</u> Nicolas Gaudenzio <i>(France)</i>		
10:30 AM-11:00 AM:	<b>Neuroimmunometabolism</b> Ana Domingos ( <i>University of Oxford, UK</i> )		
11:00 AM-11:15 AM:	<b>63-Meningeal inflammation in multiple sclerosis induces phenotypic changes in cortical microglia that differentially associate with neurodegeneration</b> Carla Rodriguez-Mogeda ( <i>Amsterdam UMC, MS Center Amsterdam, the Netherlands</i> )		
11:15 AM-11:30 AM:	<b>316-Argonaute autoantibodies are diagnostic and prognostic biomarkers for autoimmune-related sensory neuropathies</b> Christian P. Moritz (Université de Lyon, Université Claude Bernard Lyon 1, France)		
11:30 AM-11:45 AM:	6-Flow cytometric detection of functionally relevant ganglionic acetylcholine receptor antibodies in Autoimmune Autonomic Ganglionopathy Nicolas Urriola (Royal Prince Alfred Hospital, Australia)		
11:45 AM-12:00 PM:	<b>19-Perforin and TNF-alpha are crucial mediators of neuronal destruction in experimental autoimmune enteric ganglionitis.</b> Monica Sanchez-Ruiz (University of Cologne, Germany)		
12:00 PM-12:15 PM:	12-High-dimensional immune profiling in traumatic spinal cord injury patients in relation to clinical parameters Judith Fraussen (Hasselt University, Belgium)		
12:15 PM-12:30 PM:	<b>211-The Potential of Systemic Contribution in Chronic Pain</b> Wen Bo Zhou ( <i>McGill University, Canada</i> )		

### Workshop XI: Immunology in neuro-oncology

10:30 AM-11:00 AM: Glioma immunotherapy Gaetano Finocchiaro (Istituto Neurologico C.Besta, Italy)





11:00 AM-11:15 AM:	<b>195-Cervical lymph nodes and ovarian teratomas as germinal centres in</b> <b>NMDA receptor-antibody encephalitis</b> Adam Al-Diwani ( <i>University of Oxford, UK</i> )
11:15 AM-11:30 AM:	299-CLINICAL SPECTRUM AND LONG-TERM OUTCOME IN N-IRAES: THE CICLOPS STUDY Antonio Farina (Hospices Civils de Lyon, Hôpital Neurologique)
11:30 AM-11:45 AM:	<b>32-Pretreatment Neutrophil-to-Lymphocyte/Monocyte-to-Lymphocyte Ratio</b> <b>as Prognostic Biomarkers in Glioma Patients</b> Sher Ting Chim ( <i>Monash University, Australia</i> )
11:45 AM-12:00 PM:	<b>163-Identification of target antigens for glioblastoma-infiltrating CD4+ T cells</b> Reza Naghavian (University of Zurich, University Hospital Zurich, Switzerland)
12:00 PM-12:15 PM:	212-Immune contexture of isocitrate dehydrogenase stratified human gliomas revealed by single-cell transcriptomics and accessible chromatin Pravesh Gupta (The University of Texas MD Anderson Cancer Center, USA)
12:15 PM-12:30 PM:	234-Is there a paraneoplastic neurologic syndrome associated to renal and bladder cancer? Macarena Villagran (Hospices Civils de Lyon, France)

# Workshop XII: Myasthenia Gravis

Chairs: Sonia Berrih-Aknin (France) & Nils Erik Gilhus (Norway)		
10:30 AM-11:00 AM:	Etiological and pathophysiological mechanism in myasthenia gravis Rozen Le Panse (Sorbonne Université, France)	
11:00 AM-11:15 AM:	294-Higher Th17 and Th1 cells in thymoma may affect development of thymoma-associated-myasthenia gravis inducing Tfh cells Merve Cebi (Istanbul University, Turkey)	
11:15 AM-11:30 AM:	<b>36-Functional monovalency amplifies the pathogenicity of anti-MuSK IgG4 in myasthenia gravis</b> Dana L. E. Vergoossen ( <i>Leiden University Medical Center, the Netherlands</i> )	
11:30. AM-11:45 AM:	91-Conditioned Mesenchymal Stromal Cells as tools for immunomodulation in Myasthenia Gravis Alexandra Bayer Wildberger (Sorbonne Université, France)	
11:45 AM-12:00 PM:	341-Role of HIF-1 and Treg/Th17 Imbalance in the Thymus in Myasthenia Gravis Ilayda Altinonder (Istanbul University, Turkey)	
12:00 PM-12:15 PM:	129-Monoclonal antibody anti -IL-23 ameliorates neuromuscular defects in Myasthenia Gravis mouse model Nadine Dragin (Sorbonne Université, France)	



12:15 PM-12:30 PM:

247-Endogenous nucleic acids induce an organ-specific type I interferon signature in Myasthenia Gravis thymus Cloé Payet (Sorbonne University, France)

BREAK 12:30 PM – 12:45 PM

# INDUSTRIAL SYMPOSIUM | 12:45 PM-1:45 PM

### **Alexion Symposium**

# BREAK 1:45 PM – 2:00 PM

# PARALLEL SYMPOSIA | 2:00 PM-4:00 PM

#### Symposium VII: Neurons as active players in neuroinflammation

<u>Chairs:</u> Lesley Probert (Greece) & Angela Vincent (UK)

2:00 PM-2:25 PM:	TBD TBD
2:25 PM-2:40 PM:	126-Vesicle-mediated transfer of ribosomes from glia to axons during neuroinflammation Christina Vogelaar (University Medical Center Mainz, Germany)
2:40 PM-3:05 PM:	Adaptive and innate immune mechanisms: context dependent bystanders or active players in neurodegeneration Hans Lassmann (Medical University of Vienna, Austria)
3:05 PM-3:20 PM:	81-Hypothalamic AgRP neurons control lymphoid hematopoiesis in bone marrow and Treg generation in thymus. Tiziana Vigo (IRCCS Ospedale Policlinico San Martino, Italy)
3:20 PM-3:45 PM: 3:45 PM-4:00 PM:	Neuronal structure and function in the inflamed gray matter Martin Kerschensteiner (Ludwig-Maximilians University Munich, Germany) 168-Macrophages Facilitate Repair of Damaged Ribbon Synapses After Noise- Induced Hearing Loss
	Vijayprakash Manickam (Creighton University, USA)

#### Symposium VIII: Peripheral nervous system: a central target of neuroinflammation

 Chairs:
 Maartje Huijbers (the Netherlands) & Jean-Christophe Antoine (France)

 2:00 PM-2:25 PM:
 Glial-axonal interdependency at the node of Ranvier in autoimmune injury Hugh Willison (South Glasgow Hospitals University, UK)

 2:25 PM-2:40 PM:
 372-Anti-GM1 flow cytometry cell based assay is more specific for diagnosis of AMAN than ELISA methods Sabrine Salhi (AP-HM Marseille, France)





15<sup>th</sup> ISNI CONGRESS

2:40 PM-3:05 PM:	Nodo-paranodopathies: how autoantibody valency affects conduction in peripheral nerves Jérôme Devaux (Institut de Neurosciences de Montpellier, France)
3:05 PM-3:20 PM:	<b>44-Autoreactive T cells in Guillain-Barré syndrome</b> Daniela Latorre ( <i>ETH Zurich, Switzerland</i> )
3:20 PM-3:45 PM:	Nociceptor Neuron regulation of barrier immunity and host defense Isaac Chiu (Harvard Medical School, USA)
3:45 PM-4:00 PM:	240-Utilizing Epigenetics to Understand Mechanisms Underlying Primary Progressive Multiple Sclerosis Majid Pahlevan Kakhki (Karolinska Institutet, Sweden)

# Symposium IX: Gut microbiota and CNS inflammation

#### **Chairs:** Jennifer Gommerman (*Canada*)

2:00 PM-2:25 PM:	How the microbiota regulates susceptibility to CNS autoimmunity Ari Waisman (University Medical Center of the Johannes Gutenberg University, Germany)
2:25 PM-2:40 PM:	113-Dysbiosis in the Salivary Microbiome as a Promising Biomarker for Early Detection of Multiple Sclerosis Daiki Takewaki (National Center of Neurology and Psychiatry, Japan)
2:40 PM-3:05 PM:	Myelin-specific T cell trafficking to the gut triggers neuroinflammation Caroline Pot (CHUV, Switzerland)
3:05 PM-3:20 PM:	135-Microbiota-derived factors modulate intestinal immune cell function via the aryl hydrocarbon receptor and influence stroke outcome Corinne Benakis (University Hospital Munich, Germany)
3:20 PM-3:45 PM:	Grey Matters – The ageing microbiome and neuroinflammation Jennifer Gommerman (University of Toronto, Canada)
3:45 PM-4:00 PM:	310-The respiratory symbionts Moraxella catarrhalis and Klebsiella pneumoniae promote pathogenicity in myelin-reactive Th17 cells Jenny Mannion (Trinity College Dublin, Ireland)

### BREAK 4:00 PM – 4:15 PM

# PLENARY SESSION | 4:15 PM-5:45 PM

#### Plenary IV: Regeneration and neuroimmunomodulation

Chairs:<br/>Catherine Lubetzki (France) & Heinz Wiendl (Germany)4:15 PM-4:45 PM:Microglia roles in myelin health<br/>Veronique Miron (University of Edinburgh – UK)



4:45 PM-5:15 PM: Brain Macrophage Ontogeny and Functions in Health and Disease Florent Ginhoux (*SingHealth – Singapore*)

5:15 PM-5:45 PM: The central nervous system at risk – regulatory processes in health and disease Frauke Zipp (University Medical Center of the Johannes Gutenberg University Mainz – Germany)

BREAK 5:45 PM - 6:00 PM

# KEYNOTE LECTURE | 6:00 PM-7:00 PM

# The Rita Levi-Montalcini Neurobiology Lecture

Chair: Michal Schwartz (Israel)

Neurovascular Interactions: Mechanisms, Imaging, Therapeutics Katharina Akassoglou (University of California, San Francisco, USA)

# POSTER SESSION

# DAY V | FRIDAY NOVEMBER 12 – ALL TIMES IN GMT

# PARALLEL WORKSHOPS | 10:30 PM-12:30 PM

### Workshop XIII: Immunoregulation of neuroinflammation

Chairs: Roland Liblau (Fi	rance)
10:30 AM-11:00 AM:	Myositoxicity: a dark side of The Checkpoint Immunotherapy Revolution Yves Allenbach (University Hospital, France)
11:00 AM-11:15 AM:	<b>365-MCAM involvement in regulatory T cell migration across the blood brain barrier: implications for multiple sclerosis</b> Stephanie Zandee ( <i>CRCHUM, UdeM, Canada</i> )
11:15 AM-11:30 AM:	<b>96-Investigation of the opsonizing capacity of patient-derived anti-MOG antibodies</b> Marie Freier (University Medical Center, Georg August University Göttingen, Germany)
11:30 AM-11:45 AM:	297-Flanking residues of a self-dominant peptide harnesses immunity via determining the stability of antigen-specific effector Tregs Youwei Lin (National Institute of Neuroscience and National Center Hospital, National Center of Neurology and Psychiatry, Japan)





11:45 AM-12:00 PM:	<b>315-Impaired Treg suppressive function in MS is correlated with an age- and treatment-dependent altered Treg dynamics</b> Tiziana Lorenzini (University Hospital Zürich, Switzerland)
12:00 PM-12:15 PM:	348-Selective deletion of IDO1+ cDC1 worsened CNS inflammation in an experimental model of multiple sclerosis Giulia Scalisi (University of Perugia, Italy)
12:15 PM-12:30 PM:	229-Regulatory B cells ameliorate chronic CNS inflammation in an interleukin-10-dependent manner Silke Häusser-Kinzel (University Medical Center, Göttingen, Germany)

# Workshop XIV: Diversity of brain myeloid cells

Chairs:	
10:30 AM-11:00 AM:	Heterogeneity of myeloid cells in the CNS Marco Prinz (University Hospital Freiburg, Germany)
11:00 AM-11:15 AM:	<b>16-Migration and functional polarization of monocyte derived cells across</b> <b>the central nervous system barriers during neuroinflammation</b> Daniela C. Ivan (University of Bern, Theodor Kocher Institute, Switzerland)
11:15 AM-11:30 AM:	274-Oxysterol-production by brain endothelial cells suppresses Myeloid- Derived Suppressor Cells and promotes experimental autoimmune encephalomyelitis Florian Ruiz (Lausanne University Hospital and University of Lausanne, Switzerland)
11:30 AM-11:45 AM:	<b>268-Neutrophil plasticity in neonatal hypoxic-ischemic brain injury</b> Josephine Herz ( <i>University Hospital Essen, Essen, Germany</i> )
11:45 AM-12:00 PM:	237-Microglia heterogeneity in different regions of the healthy mouse central nervous system Fazeleh Etebar (Queensland University of Technology, Australia)
12:00 PM-12:15 PM:	350-IL-15 expression is distinctly modulated on myeloid cells by inflammatory factors in MS Negar Farzam-kia (University of Montreal, Centre de Recherche du CHUM, Canada)
12:15 PM-12:30 PM:	147-Exploring the transcriptomic diversity of live human microglia in aging, neurodegeneration, and neuroinflammation John Tuddenham (Columbia University Irving Medical Center, USA)

# Workshop XV: Metabolism in Neuroimmunology

Chairs: Anne Dejean (Fro	ance)
10:30 AM-11:00 AM:	Targeting the metabolism of T cells for the treatment of autoimmune disease
	Luciana Berod (Johannes Gutenberg University Mainz, Germany)







11:00 AM-11:15 AM:	<b>10-iPSC-derived astrocytes from patients with Multiple Sclerosis show</b> <b>metabolic alterations</b> Bruno Ghirotto (University of São Paulo, Brazil)
11:15 AM-11:30 AM:	24-Dissecting the role of IGF1R in neuroinflammation: a parallel focus on oligodendrocytes and myeloid cells Giuseppe Locatelli (University of Bern, Switzerland)
11:30 AM-11:45 AM:	<b>182-Regulation of human oligodendrocytes process extension by the integrated stress response.</b> Florian Pernin ( <i>McGill University, Canada</i> )
11:45 AM-12:00 PM:	233-Eomes regulates mitochondrial function and promotes survival of pathogenic CD4+ T cells during CNS autoimmunity Emeline Joulia (Institut Toulousain Des Maladies Infectieuses Et Inflammatoires (infinity), France)
12:00 PM-12:15 PM:	<b>68-Alterations in adipokine levels in MS patient cohort project Y</b> Merel Rijnsburger ( <i>Amsterdam UMC, MS Center Amsterdam, the Netherlands</i> )
12:15 PM-12:30 PM:	<b>146-Metabolic regulation of MS specific neural stem cells</b> Rosana-Bristena Ionescu (University of Cambridge, UK)
Workshop XVI: Tissue-	resident T cells in CNS inflammation
Chairs: Hans Lassmann (Austria) & Doron Merkler (Switzerland)	
10:30 AM-11:00 AM:	Tissue resident memory T cells in multiple sclerosis

10.007.00111007.000	Joost Smolder (University Medical Center Rotterdam, the Netherlands)
11:00 AM-11:15 AM:	<b>18-CD8 T cells target enteric neurons in patients with gastrointestinal dysmotility</b> Anna Brunn (University of Cologne, Germany)
11:15 AM-11:30 AM:	215-Tissue-resident memory CD8+ T cells drive compartmentalized and chronic autoimmune damage against CNS neurons David Frieser (Toulouse Institute for infectious and inflammatory diseases (Infinity), France)
11:30 AM-11:45 AM:	<b>309-Regulatory T cells counteract CNS neuroinflammation via TGF-β</b> <b>signalling in CNS myeloid cells</b> Stefan Bittner (University Medical Center of the Johannes Gutenberg University Mainz, Germany)
11:45 AM-12:00 PM:	<b>319-Cytotoxic-like Eomes+ Th cells in secondary progressive multiple sclerosis</b> Ben Raveney ( <i>National Institute of Neuroscience, NCNP, Japan</i> )
12:00 PM-12:15 PM:	117-Activated Eomes-Tfh1 cells infiltrate the cerebrospinal fluid in early Multiple Sclerosis Marion Mandon (Univ Rennes, France)



12:15 PM-12:30 PM:

# 292-Contact-dependent granzyme B-mediated cytotoxicity of Th17 cells towards human oligodendrocytes

Hélène Jamann (Centre de Recherche du Centre Hospitalier de l'Université de Montréal (CRCHUM), Université de Montréal, Canada)

#### BREAK 12:30 PM – 12:40 PM

### PANEL DISCUSSION | 12:45 PM-1:45 PM

#### Panel Discussion: Immunotherapy in MS: 8 key questions

Chairs: Giancarlo Comi (Italy) & Roland Liblau (France)

12:40 PM-12:48 PM	<b>MS one or several diseases?</b> Catherine Lubetzki
12:48 PM – 12:56 PM	Is anti MOG a disease or one of the many variants of MS? Kazuo Fujihara
12:56 PM-1:04 PM	Is MRI sensitive enough to detect inflammatory activity? Heinz Wiendl
1:04 PM-1:12 PM	Is there any useful serum or CSF biomarker to detect and predict inflammatory activity? Hans Peter Hartung
1:12 PM-1:20 PM	Immunotherapy of MS: induction or escalation? Gilles Edan
1:20 PM-1:28 PM	Is there a role for cellular therapy? Frauke Zipp
1:28 PM-1:36 PM	Can we fully block neuroinflammation in MS? Howard Weiner
1:36 PM-1:44 PM	Which combination immunotherapy can we forsee for MS? Patrick Vermersch

### BREAK 1:45 PM – 2:00 PM

### KEYNOTE LECTURE | 2:00 PM-3:00 PM

The Dale McFarlin Lecture

<u>Chairs:</u> Tomas Olsson (Sweden) Translational reserach towards personalized medicine for MS and NMOSD Takashi Yamamura (NCNP, Japan)



#### BREAK 3:00 PM – 3:15 PM

# PARALLEL SYMPOSIA | 3:15 PM-5:30 PM

### Symposium X: Drainage and immunosurveillance of the CNS

Chair: Alexandre Prat (Cana	ıda)
3:15 PM-3:30 PM:	<b>153-Pericytes play a protective role during neuroinflammation</b> Dila Atak (Koç University, Turkey)
3:30 PM-3:55 PM:	<b>Breaking (Bad) Brain Barriers Beliefs</b> Jonathan Kipnis ( <i>Washington University in St. Louis, School of Medicine, USA</i> )
3:55 PM-4:10 PM:	<b>169-The role of the meningeal layers in CNS autoimmunity</b> Arianna Merlini ( <i>University Medical Center, Göttingen, Germany</i> )
4:10 PM-4:35 PM:	Harnessing brain T cells to modulate neurodegeneration Adrian Liston (CHU PURPAN, AAA)
4:35 PM-4:50 PM:	322-Migration across the blood-brain barrier affects mTOR signalling in regulatory T cells Pauline Baeten (Hasselt University, Belgium)
4:50 PM-5:15 PM:	Oligodendrocyte-derived extracellular vesicles as antigen-specific therapy for CNS inflammatory demyelination Abdolmohamad Rostami (Thomas Jefferson University, USA)
5:15 PM-5:30 PM:	<b>166-Multiple sclerosis and circadian rhythm: a systematic review</b> Francisco Lima-Neto ( <i>State University of Montes Claros, Brazil</i> )

### Symposium XI: Multi-omics in Neuroimmunology

Chair: Naomi Habib (Israel) & Burkhard Becher (Switzerland)3:15 PM-3:30 PM:82-Transcriptome guided optimization of in vitro culture conditions for<br/>adult primary microglia<br/>Raissa Timmerman (Biomedical Primate Research Centre, the Netherlands)15:30-15:55:TBD<br/>David Hafler3:55 PM-4:10 PM:262-Investigating B cells and their depletion in relapsing-remitting Multiple<br/>Sclerosis using DNA methylation patterns<br/>Ewoud Ewing (Karolinska Institutet, Sweden)4:10 PM-4:35 PM:Integrating genome, metagenome and data science to understand MS<br/>Sergio Baranzini (University of California San Francisco, USA)





4:35 PM-4:50 PM:	326-Transcriptomic characterization of CSF reveals T and Myeloid cells as early players during MS disease onset Hanane Touil (Columbia University Irving Medical Center, USA)
4:50 PM-5:15 PM:	Applied epigenomics: insights into the pathogenesis of Multiple Sclerosis Maja Jagodic (Karolinska Institutet, Sweden)
5:15 PM-5:30 PM:	368-Large-scale phosphoproteomic mapping of RTKs reveals dynamic architecture and microglia expression in blunt TBI Rida Rehman (Ulm University, Germany)

# Symposium XII: Immunopsychiatry: is it a nascent field?

Chair: Roberto Furlan (Italy,	)
3:15 PM-3:30 PM:	33-Encephalitis with Autoantibodies against the Glutamate Kainate Receptor (GluK2) Jon Landa (Universitat de Barcelona, Spain)
3:30 PM-3:55 PM:	<b>Towards a clinical immunological diagnosis of psychiatric disorders</b> Hemmo A. Drexhage (University Medical Center Rotterdam, the Netherlands)
3:55 PM-4:10 PM:	164-GABAAR autoantibodies have differential effect on GABAAR and contribute differently to GABAAR encephalitis Adriana van Castern (Charité universitätsmedizin, Germany)
4:10 PM-4:35 PM:	Modulatory roles of the immune system in shaping animal behaviors Jun Huh (Harvard Medical School, USA)
4:35 PM-4:50 PM:	80-Deviated B cell receptor repertoire in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Wakiro Sato (National Institute of Neuroscience, National Center of Neurology and Psychiatry, Japan)
4:50 PM-5:15 PM:	Remembering immunity: brain representation of peripheral immune activity Asya Rolls ( <i>Technion, Israel Institute of Technology, Israel</i> )
5:15 PM-5:30 PM:	279-Slow disease progression and clinical heterogeneity make anti-CASPR2 encephalitis a diagnostic challenge Jeanne Benoit (Hospices Civils de Lyon, Hôpital Neurologique, France)

BREAK 17:30 – 17:45



WE ARE NEUROIMMUNOLOGY | 17:45-18:30

CLOSING