PROVISIONAL PROGRAMME

(contents subject to change)

Palais des Congrès de Montréal, Canada
6 to 8 December 2024
(on-demand access available until 5 March 2025)

FRIDAY 6 DECEMBER

SESSION 1 JOINT OPENING SESSION	
08.30 – 08.35	Welcome **– A Al-Chalabi (UK) and B Dickie/N Cole (UK)**
08.35 – 08.45	Welcome from Host Association/Dignitary
08.45 – 09.25	**Stephen Hawking Memorial Lecture: C1** Distinguishing Myth and Reality in Biomedical Research – ***T Caulfield (Canada)***
09.25 – 09.35	International Alliance Forbes Norris Award
09.35 – 09.50	IPG Award and winner's research presentation
09.50 – 10.00	Longitude Prize announcement

10.00 – 10.30 COFFEE

SESSION 2A GENETICS	SESSION 2B IMPROVING CLINICAL MANAGEMENT	SESSION 2C PRESYMPTOMATIC DETECTION AND EARLY DIAGNOSIS
10.30 – 11.00 **C2** Genetics and phenotypic heterogeneity of ALS/MND in Africa and people of African ancestry ***J Heckmann (South Africa) / D Singh Sokhi (Kenya)***	**10.30 – 10.50** **C9** Dextromethorphan/quinidine (DMQ) in the treatment of bulbar symptoms in ALS: Patient-reported outcomes in a multicenter study ***S Spittel (Germany)***	**10.30 – 10.45** **C16** Pre-symptomatic ALS/FTD: from biology to prevention? ***M Benatar (USA)***
11.00 – 11.15 **C3** IBD methods detecting distant relatedness between ALS patients facilitate new pathogenic gene discovery ***P Merbaum (Netherlands)***	**10.50 – 11.10** **C10** Treatment patterns and survival benefit of edaravone-treated people with ALS in the ALS/MND Natural History Consortium ***S Apple (USA)***	**10.45 – 11.00** **C17** Community support information requirements for ALS gene carriers ***C Haddad (USA)***
11.15 – 11.30 **C4** Leveraging identity-by-descent to build pedigrees for disease gene discovery ***L Henden (Australia)***	**11.10 – 11.30** **C11** Development of a saliva-suppressing scopolamine patch without side effects ***M Ogino (Japan)***	**11.00 – 11.15** **C18** Design of preventative trials in ALS ***S Fradette (USA)***
11.30 – 11.45 **C5** Investigating the female protective effect in ALS: Insights from TARDBP mutations carriers in Italy ***M Grassano (Italy)***	**11.30 – 11.45** **C12** Longitudinal psychometric properties of the DYALS scale in monitoring swallowing function changes in ALS patients ***C Cattaneo (Italy)***	**11.15 – 11.30** **C19** Pre-motor changes in PD: lessons for ALS and FTD ***R Postuma (Canada)***
11.45 – 12.00 **C6** Insights into oligogenic inheritance in familial ALS through Whole Genome Sequencing analysis ***M Deng (China)***	**11.45 – 12.00** **C13** Development of optimal screening cut-off values from ALSFRS-R bulbar subscore in detecting different levels of dysphagia in a large cohort of ALS patients ***F Cerri (Italy)***	**11.30 – 11.45** **C20** FTD Detection and diagnosis ***E Finger (Canada)***

12.00 – 12.15 **C7** Exome-wide protein domain burden analysis identifies genetic associations with ALS risk ***H Marriott (UK)***	**12:00 – 12.15** **C14** Self-assessment of ALS functional rating scale on the patient's smartphone proves to be non-inferior to clinic data capture ***L Steinfurth (Germany)***	**11.45 – 12.30** **PANEL DISCUSSION / Q&A**
12.15 – 12.30 **C8** Splitformer identifies intronic splicing variants in ALS ***M Zhang (China)***	**12.15 – 12.30** **C15** Qualitative experiences of Acceptance and Commitment Therapy from the perspectives of people living with MND and therapists: Data from an uncontrolled feasibility study and a randomised controlled trial ***R Gould (UK)***	

12.30 – 14.00 LUNCH

SESSION 3A GLIA	SESSION 3B CLINICAL TRIALS	SESSION 3C NEUROPHYSIOLOGY
14.00 – 14.15 **C21** Are myelinating cells an under-appreciated therapeutic target in ALS? ***K Lewis (Australia)***	**14.00 – 14.20** **C27** Main results from the ADORE study: An international Phase 3 trial to investigate the efficacy and safety of daily oral edaravone (FNP122) in ALS ***N Albareda (Spain)***	**14.00 – 14.20** **C32** The novel combination of Transcranial Magnetic Stimulation and high-density EMG sensitivity captures ALS decline ***A Carobin (UK)***
14.15 – 14.30 **C22** Interrogating the differential toxicity of C9orf72 astrocytes against ALS motor neurons and FTD cortical neurons ***M Myszczynska (UK)***	**14.20 – 14.40** **C28** PrimeC, an oral candidate for ALS, demonstrates safety and efficacy in a 12-month Phase 2b trial ***M Cudkowicz (USA)***	**14.20 – 14.40** **C33** Long intracortical inhibition is not abnormal in ALS: A threshold tracking TMS study ***R McMackin (Ireland)***
14.30 – 14.45 **C23** Investigation of WDR49 expression in astrocytes as a driver of ALS pathogenesis ***M King (UK)***	**14.40 – 15.00** **C29** Safety, tolerability and efficacy of the rho kinase inhibitor fasudil in ALS (ROCK-ALS): A Phase 2, randomise, double-blind, placebo-controlled trial ***P Lingor (Germany)***	**14.40 – 15.00** **C34** Regional cortical gamma band activity reflects motor and cognitive deficits in ALS ***M Trubshaw (UK)***
14.45 – 15.00 **C24** Targeting RNA binding protein SRSF3 and immune mRNAs translation restores microglia function in ALS ***J Kriz (Canada)***	**15.00 – 15.15** **C30** HERV-K/HML-2 suppression using antiretroviral therapy in ALS ***D Pandya (USA)***	**15.00 – 15.15** **C35** Upper limb somatosensory evoked potentials latency as a biomarker for early-stage ALS ***C Lunetta (Italy)***
15.00 – 15.15 **C25** Microglia-dependent synaptic dysregulation and complement activation in C9orf72 ALS iPSC-derived motor neuron-microglia co-cultures ***B Vahsen (UK)***	**15.15 – 15.30** **C31** Long-term safety and efficacy of ultrahigh-dose methylcobalamin in early-stage ALS: JETALS interim analysis and open-label extended period ***R Kaji (Japan)***	**15.15 – 15.30** **C36** Peripheral cause for split hand syndrome in ALS: Subclinical involvement of small hand muscles in early affected hands ***M de Carvalho (Portugal)***
15.15 – 15.30 **C26** VHB937, a TREM2 stabilizing and activating antibody, strongly reduces pathology after peripheral administration in a broad range of animal models for neuroinflammation and neurodegeneration ***D Feuerbach (Switzerland)***		

15.30 – 16.00 COFFEE

SESSION 4A *IN VITRO* MODELS	SESSION 4B EPIDEMIOLOGY	SESSION 4C MOTOR NEURON HETEROGENEITY
16.00 – 16.30 **C37** ALS-in-a-dish: modelling motor neuron disease using advanced human in vitro models ***J Pasterkamp (Netherlands)***	**16.00 – 16.15** **C42** Association between sleep and ALS-FTSD: A prospective cohort study based on 396,918 UK Biobank participants ***T Yang (China)***	**16.00 – 16.30** **C48** Cellular vulnerability and disease spread in amyotrophic lateral sclerosis: Is it time to re-think upper and lower motor neurons? ***J Ravits (USA)***
16.30 – 16.45 **C38** TDP-43 loss of function induces neuromuscular junction degeneration in a human stem cell derived neuromuscular assembloid model ***A Salzinger (UK)***	**16.15 – 16.30** **C43** A population-based mapping and ecological analysis of ALS incidence in the Republic of Ireland between 1995 and 2022 ***E Mac Domhnaill (Ireland)***	**16.30 – 17.00** **C49** The importance of understanding the biology and pathology of upper motor neurons for building effective treatment strategies ***H Ozdinler (USA)***
16.45 – 17.00 **C39** Selective disruption of passive nucleocytoplasmic transport in C9ALS/FTD: Arginine DPRs target FG nucleoporins and disrupt protein movement in a sequence-specific manner ***D Solomon (UK)***	**16.30 – 16.45** **C44** Association between previous psychiatric disorders and ALS: A population-based prospective cohort study ***Y Tan (China)***	**17.00 – 17.15** **C50** Network spreading and local biological vulnerability in ALS ***A Farahani (Canada)***
17.00 – 17.15 **C40** C210rf2 mutations point towards primary cilia dysfunction in ALS ***P Van Damme (Belgium)***	**16.45 – 17.00** **C45** Physical activity is associated with lower risk of ALS, including in C9orf72 expansion carriers ***J Gao (UK)***	**17.15 – 17.30** **C51** Somatic mosaicism in ALS and FTD reveals widespread degeneration from focal mutations ***Z Zhou (USA)***
17.15 – 17.30 **C41** Embryonic motor neuron programming factors reactivate immature gene expression and suppress ALS pathologies in postnatal motor neurons ***E Lowry (USA)***	**17.00 – 17.15** **C46** Neighbourhood deprivation and functional impairment in ALS ***R Boyle (USA)***	
	17.15 – 17.30 **C47** Epigenetic age acceleration is associated with ALS risk, survival, occupational exposures and sex ***X Li (USA)***	

17.30 – 19.00 - POSTER SESSION A

SATURDAY 7 DECEMBER

SESSION 5A CELL BIOLOGY AND PATHOLOGY	SESSION 5B RESPIRATORY MANAGEMENT	SESSION 5C NEUROIMAGING
08.30 – 09.00 **C52** On brains and vessels: How vascular mechanisms contribute to ALS neurodegeneration ***S Lewandowski (Sweden)***	**08.30 – 09.00** **C57** Optimising non-invasive ventilation in ALS ***D McKim (Canada)***	**08.30 – 08.45** **C62** Cortical and subcortical volumetric MRI biomarkers of C9orf72 repeat expansions ***C McMillan (USA)***
09.00 – 09.15 **C53** Sporadic ALS-TDP does not represent a single homogeneous neuropathology ***R Tan (Australia)***	**09.00 – 09.15** **C58** Respiratory measurements, respiratory symptoms and quality of life in ALS: Results from the REVEALS study ***D Murray (Ireland)***	**08.45 – 09.00** **C63** Regional vulnerability of the connectome topology in ALS ***B Kalkhoven (Netherlands)***
09.15 – 09.30 **C54** Amygdala iron changes are associated with cognitive performance, behavioural deficit and TDP-43 pathology ***H Spence (UK)***	**09.15 – 09.30** **C59** Peak Inspiratory Flow (PIF) as a predictor of early respiratory decline in ALS ***U Manera (Italy)***	**09.00 – 09.15** **C64** Attrition-corrected cerebral cortical thickness as a longitudinal imaging biomarker in ALS ***MJ Wendebourg (Netherlands)***
09.30 – 09.45 **C55** Molecular and cellular mechanisms of cognitive impairment in ALS ***C Gouveia Roque (USA)***	**09.30 – 09.45** **C60** Respiratory quotient as independent predictor of prognosis in a large cohort of ALS patients ***F Cerri (Italy)***	**09.15 – 09.30** **C65** Individual ALS progression markers and disease sub-trajectories encoded in multimodal neuroimaging data ***T Baumeister (Canada)***
09.45 – 10.00 **C56** Harnessing a key chaperone to halt TDP-43 aggregation in MND ***R San Gil (Australia)***	**09.45 – 10.00** **C61** Monitoring the progression of hypoventilation for indicating when to use breathing support in patients with ALS/MND ***P Cazzolli (USA)***	**09.30 – 09.45** **C66** Multimodal MRI clustering identifies three distinct neurodegeneration-based subtypes of ALS ***P Van Lieshout (Netherlands)***
		09.45 – 10.00 **C67** Stronger together: The effect of cognitive abilities and cortical thickness on speech timing abilities in ALS ***J Bradsby (Canada)***

10.00 – 10.30 COFFEE

SESSION 6A PROTEOSTASIS & PROTEOTOXICITY	SESSION 6B EXPERIMENTAL MEDICINE AND TRIAL DESIGN	SESSION 6C COGNITIVE AND BEHAVIOURAL CHANGE
10.30 – 11.00 **C68** Transmission of Misfolded Proteins in Neurodegenerative Disorders: A Common Mechanism of Disease Progression ***V Lee (USA)***	**10.30 – 11.10** **C75** Experimental Medicine to identify therapies in ALS ***M Turner (UK)***	**10.30 – 11.00** **C81** Defining concepts and modifiers of cognition in ALS ***C McMillan (USA)***
11.00 – 11.15 **C69** Structures of pathological TDP-43 filaments in ALS and FTD ***D Arseni (UK)***	**11.10 – 11.30** **C76** Evaluating and optimizing an ALS platform trial design: Insights for future directions ***L Chibnik (USA)***	**11.00 – 11.15** **C82** Age-related incidence of neurodegenerative diseases in C9orf72 expansion carriers from a population-based cohort ***J Gao (UK)***
11.15 – 11.30 **C70** A stress-dependent TDP-43 SUMOylation program preserves neuronal function ***T Suk (Canada)***	**11.30 – 11.45** **C77** Boosting clinical trial power in ALS with AI-generated digital twins ***C Kusiak (USA)***	**11.15 – 11.30** **C83** The features of behavioural impairment in Chinese ALS patients ***J Tang (China)***

11.30 – 11.45 **C71** LRSAM1 mitigates neurodegeneration in ALS by regulating clearance of TDP-43 ***T Shirakawa (USA)***	**11.45 – 12.00** **C78** Cultivating patient preferences in ALS clinical trials: The Patient-Ranked Order of Function (PROOF) ***R van Eijk (Netherlands)***	**11.30 – 11.45** **C84** Cognitive screening in ALS in Ireland: A 10-year study of prevalence, instrument sensitivity and confounding factors ***E Costello (Ireland)***
11.45 – 12.00 **C72** Pre-symptomatic pathological TDP-43 aggregation is a common feature in peripheral, non-central nervous system tissues in people with ALS ***J Gregory (UK)***	**12.00 – 12.15** **C79** Longitudinal comparison of the Italian version of the ALSFRS-R and ROADS: An Italian multicenter prospective study ***E Matteoni (Italy)***	**11.45 – 12.00** **C85** Predicting cognitive and behavioural decline in ALS patients: a prospective pilot study ***A Chio (Italy)***
12.00 – 12.15 **C73** Intrinsic and TDP-43 dysfunction-driven cellular degradation loads evoke Tfe3a-assoicated neuroprotective autophagy in large spinal motor neurons ***K Asakawa (Japan)***	**12.15 – 12.30** **C80** Harmonization e-learning for ALS clinical trials: ALSFRS-R harmonized online training platform for cross-continent collaboration ***G Kittle (USA)***	**12.00 – 12.15** **C86** Development of cognitive/behavioural disturbances in motor neuron diseases: Can we predict it? ***P Ferraro (Italy)***
12.15 – 12.30 **C74** Enhancing proteostasis in ALS through novel brain-penetrating peptides: A therapeutic approach targeting autophagy ***A Amin (Australia)***		**12.15 – 12.30** **C87** Prodromal mild cognitive impairment in ALS and FTD: A revised framework ***C McHutchison (UK)***

12.30 – 14.00 LUNCH

SESSION 7A IMMUNITY AND NEUROINFLAMMATION	SESSION 7B AUTONOMY & DECISION-MAKING	SESSION 7C ANTISENSE AND siRNA-BASED THERAPEUTIC STRATEGIES
14.00 – 14.20 **C88** RIG-1 but not Sting mediate neuron specific IFN type 1 signalling in FUS-ALS induced neurodegeneration and offers new biomarker driven individualized treatment options ***A Herman (Germany)***	**14.00 – 14.45** **C93** MAID: From legislation to practice ***W Johnston (Canada)***	**14.00 – 14.30** **C97** Antisense-based therapies for rare neurological diseases ***F Bennett (USA)***
14.20 – 14.40 **C89** Investigating the metabolic crosstalk between senescent T cells and microglia from patients with ALS ***V Tsang (UK)***	**14.45 – 15.00** **C94** The OCEAAMM: A decision support tool to evaluate competency to consent to MAID ***S Charbonneau (Canada)***	**14.30 – 14.45** **C98** Update on Silence ALS: A platform for the discovery and development of antisense therapeutics for patients with ultra-rare forms of ALS ***N Shneider (USA)***
14.40 – 15.00 **C90** Functionally distinct Treg subsets exhibit unique mechanisms of dysfunction in ALS ***C Baecher-Allan (USA)***	**15.00 – 15.15** **C95** The use of support strategies to improve mental capacity to make treatment decisions in ALS ***S Abrahams (UK)***	**14.45 – 15.00** **C99** Antisense oligonucleotides are broadly distributed but do not provide sustained suppression of G4C2 pathology in c9ALS patients ***J Glass (USA)***
15.00 – 15.15 **C91** Immune checkpoint changes correlate with the progression and prognosis of ALS ***S Chen (China)***	**15.15 – 15.30** **C96** SOD1 gene screening in ALS: Frequency of mutations, patients' attitudes to genetic information and translation to tofersen treatment in a multi-center program ***T Meyer (Germany)***	**15.00 – 15.15** **C100** RAG-17: A promising new gene silencing therapy for SOD1 ALS. Early safety and efficacy data from a first-in-human trial ***J Ye (China)***

15.15 – 15.30 **C92** Longitudinal analysis of T cell responses in ALS ***S Yazdani (Sweden)***		**15.15 – 15.30** **C101** Development of an UNC13A cryptic exon skipping antisense oligonucleotide as a treatment for ALS ***W-H Chang (USA)***

15.30 – 16.00 COFFEE

SESSION 8A RNA BIOLOGY	SESSION 8B BIOMARKERS	SESSION 8C SPONSORED SESSION (TBC)
16.00 – 16.30 **C102** Using spatial genomics to study the central nervous system in health and disease ***H Phatnani (USA)***	**16.00 – 16.20** **C107** Elevated cerebrospinal fluid UCHL1 in asymptomatic C9orf72 hexanucleotide repeat expansion carriers ***E Dellar (UK)***	
16.30 – 16.45 **C103** Employing advanced long-read RNA sequencing in post mortem brain specimens to explore transciptomic diversity associated with upper and lower motor neuron pathology ***A Jain (USA)***	**16.20 – 16.40** **C108** Combination of serum neurofilament light and serum cardiac troponin T improves diagnostic accuracy in ALS ***P Weydt (Germany)***	
16.45 – 17.00 **C104** Single-nucleus transcriptome atlas of orbitofrontal cortex in ALS and FTLD with a deep learning-based decoding of alternative polyadenylation mechanisms ***P McKeever (Canada)***	**16.40 – 17.00** **C109** Total tau and phosphorylated tau levels as diagnostic biomarkers for ALS ***T Petrozziello (USA)***	
17.00 – 17.15 **C105** Exploring ALS differential vulnerability using single-cell transcriptomic analysis ***P Alipour (Canada)***	**17.00 – 17.20** **C110** Development of a blood test to distinguish amyotrophic lateral sclerosis from primary lateral sclerosis ***S Banack (USA)***	
17.15 – 17.30 **C106** A journey through space and time: ALS human and mouse spinal cords demonstrate altered gene expression relative to disease pathology ***S Howe (Australia)***		

17.30 – 19.00 POSTER SESSION B

SUNDAY 8 DECEMBER

08.30 – 10.00 POSTER SESSION C

10.00 – 10.30 COFFEE

SESSION 9A MURINE MODELS	SESSION 9B INTERDISCIPLINARY CARE: POLICY AND PRACTICE	SESSION 9C BIOMARKERS (II)
10.30 – 10.50 **C111** A TBK1 variant causes autophagolysosomal and motoneuron pathology without neuroinflammation in mice ***D Brenner (Germany)***	**10.30 – 10.50** **C118** Clinicians' Perceptions of Palliative Care for Amyotrophic Lateral Sclerosis (ALS): Results of National Surveys of Interdisciplinary ALS and Palliative Care Clinicians in the United States ***K Bischoff (USA)***	**10.30 – 10.50** **C124** Novel prognostic protein discovery using Olink proximity extension assay in a large longitudinal ALS cohort ***D Lester (UK)***
10.50 – 11.10 **C112** Developing an inducible muscle-specific TDP-43 mouse model to investigate ALS ***A Russell (Australia)***	**10.50 – 11.10** **C119** How do multidisciplinary teams support people with MND to make decisions about gastrostomy placement: a qualitative multiple case study **S White (UK)**	**10.50 – 11.10** **C125** Detection and Discovery of Urinary Biomarkers of Immune Dysfunction for Amyotrophic Lateral Sclerosis ***V Karnaros (Australia)***
11.10 – 11.30 **C113** TDP-43 cytoplasmic mislocalisation drives synaptic dysfunction and persistent non-motor behavioural changes in the rNLS8 mouse model of ALS/FTD ***W Luan (Australia)***	**11.10 – 11.30** **C120** *How do people living with MND and their carers experience specialized care? Development and validation of a patient reported questionnaire* ***AK Schmidt (Netherlands)***	**11.10 – 11.30** **C126** Targeted proteomics upon Tofersen treatment highlights candidate therapy-responsive markers for SOD1-linked ALS ***A Catanese (Germany)***
11.30 – 11.45 **C114** Spatial transcriptomic profiling of the lower motor neuron circuitry reveals an axonal-specific RNA signature and local translation defects in mutant FUS-mediated ALS ***D Piol (Belgium)***	**11.30 – 11.50** **C121** Virtual care delivery models and team functioning in ALS – a pan-Canadian experience with interdisciplinary virtual care in ALS ***B Ritsma (Canada)***	**11.30 – 11.50** **C127** Longitudinal analysis of immune cell changes in FUS-ALS patients treated with a FUS antisense oligonucleotide ***O Rifai (USA)***
11.45 – 12.00 **C115** Unveiling a novel mechanistic link between oxidative stress and pathophysiology of Amytrophic Lateral Sclerosis ***E Eftekharpour (Canada)***	**11.50 – 12.10** **C122** Proposal for a U.S National Integrated ALS Care and Research Network System- Excerpts from the National Academies of Medicine Report on ALS ***S Babu (USA)***	**11.50 – 12.10** **C128** Corneal small fiber neuropathy in ALS patients: a corneal confocal microscopy study ***Z Zou (China)***
12.00 – 12.15 **C116** Comparison of the motor neuron translatome in mouse models of ALS and SMA reveals defects specific to protein translation. ***H Smith (UK)***	**12.10 – 12.30** **C123** The EU ALS Coalition call for action: Roadmap of the policy changes needed across Europe to improve the lives of PLWALS and their carers across Europe ***J Grosskreutz (Germany)***	**12.10 – 12.30** **C129** Seed-amplification assays: Windows into ALS and kindred diseases ***R Smith (USA)***
12.15 – 12.30 **C117** Assessing in vivo axonal transport of mitochondria and signalling endosomes in distinct α-motor neuron subtypes in SOD1G93A mice ***A Tosolini (Australia)***		

12.30 – 13.30 LUNCH

SESSION 10 JOINT CLOSING SESSION	
	Invitation to San Diego 2025
13.40 – 13.50	Poster Prize Awards
	Healey Center Prize
	Lalji Family Award
14.10 – 14.30	**C130** Early onset sleep alterations in ALS and their mechanisms – ***L Dupuis (France)***
14.30 – 15.00	**C131** Outcome measures in ALS clinical trials: progress to date and future directions – ***A Genge (Canada)***
15.00 – 15.15	Late breaking news