Organised by the Motor Neurone Disease Association in co-operation with the International Alliance of ALS/MND Associations
The 32nd International Symposium on ALS/MND, Northampton, United Kingdom, 07/12/2021-10/12/2021 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 10 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 Credits™. Information on the process to convert EACCME® credit to AMA credit can be found at www.ama-assn.org/education/earn-credit-participation-international-activities.

Live educational activities, occurring outside of Canada, recognised by the UEMS-EACCME® for ECMEC®s are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada.
Foreword

Welcome to the 32nd annual symposium on ALS/MND, which for the second year in succession is being held online. While we all value and benefit from meeting in person, the great advantage of a virtual symposium is that many more people can attend, and this year, perhaps more than any other before it, has very exciting progress to showcase and explore.

How can we accelerate the search for a cure? It would be good to have ways to test potential treatments quickly before they reach clinical trials, and once at trial, we need a way to measure ALS progression, to diagnose it, and even better, to tell quickly if someone is responding to treatment. A major focus of this year’s conference is translating discovery science into an effective therapy as rapidly as possible using artificial intelligence, virtual biopsies, biomarkers, and new trial designs to achieve all these things.

Genetics and gene therapy are two big themes in this year’s conference and look to be strong contenders as the first route to complete translation of discovery science to effective treatment. However, there are many implications for people living with ALS, treating teams and health services.

Three important clinical topics are nutrition, cognition, and disease progression and survival, all of which impact each other and quality of life. A number of international experts discuss these issues in detail.

The International Symposium on ALS/MND has a special place in the ALS community, providing a bridge between science and clinical practice, and bringing evidence of the dramatic progress being made in efforts to finally, truly stop ALS/MND. I wish you a very enjoyable meeting.

Ammar Al-Chalabi
Programme Committee Chair
## Tuesday 7 December 2021

### SESSION 1

#### OPENING SESSION

*Chairs: S Light (UK) A Al-Chalabi (UK)*

<table>
<thead>
<tr>
<th>Time</th>
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<tr>
<td>14.00</td>
<td>Welcome – S Light (UK) and A Al-Chalabi (UK)</td>
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<tr>
<td>14.05</td>
<td>The Stephen Hawking Memorial Lecture</td>
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<tr>
<td>14.10</td>
<td>C1 CRISPR: The science and opportunity of genome editing</td>
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<tr>
<td>14.45</td>
<td>International Alliance Humanitarian Award</td>
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<td>15.00</td>
<td>IPG Award and winner’s research presentation</td>
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### SESSION 2

#### CLINICAL TRIALS

*Chairs: K Talbot (UK) A Al-Chalabi (UK)*

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<thead>
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<th>Time</th>
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<tbody>
<tr>
<td>15.25</td>
<td>C2 ALS Drug Development Programs 2021: Overview of the international</td>
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<td>ALS drug development programs with the integration of Biomarkers in</td>
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<td>Early Phase development program</td>
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<td>A Genge (Canada)</td>
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<tr>
<td>15.45</td>
<td>C3 Long-term functional benefits and safety of a fixed-dose</td>
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<td>coformulation of sodium phenylbutyrate and taurursodiol in ALS</td>
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<td>S Paganoni (USA)</td>
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<tr>
<td>15.55</td>
<td>C4 Long-term follow-up of masitinib study AB10015 shows prolonged</td>
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<td>survival in patients that start treatment prior to severe impairment</td>
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<td>A Ludolph (Germany)</td>
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<tr>
<td>16.05</td>
<td>C5 NurOwn targets multiple disease pathways in ALS Phase 3 Trial</td>
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<tr>
<td></td>
<td>R Brown (USA)</td>
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<tr>
<td>16.15</td>
<td>Discussion/Questions</td>
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4
16.50 – 18.20

**LIVE POSTER SESSION A**

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**EPI-01** Unbiased metabolomics by Mendelian randomisation links serum isoleucine to risk of amyotrophic lateral sclerosis  
Dr Johnathan Cooper-knock

**EPI-02** Verification Audit of Amyotrophic Lateral Sclerosis(ALS)Cases Identified by Community Neurologists According to Revised El Escorial Criteria[rEEC]in Center for Disease Control and Prevention–Agency for Toxic Substance Disease Registry[CDC–ATSDR] State and Metropolitan Area ALS Surveillance Projects  
Professor Benjamin Rix Brooks

**EPI-03** ALS is a multistep process in northeastern Brazil  
Professor Mario Emilio Dourado

**EPI-04** The Relation of Exposure to Ambient Air Toxics and ALS using the EPA National Air Toxics Assessment Database: A Case-Control Study of ALS involving the National ALS Registry  
Miss Fan Wu

**GEN-01** Genetic analysis using a Gene Panel in a cohort of 282 Spanish Patients with ALS  
Mr Gerardo Alonso

**GEN-02** Three cases of FUS-associated Amyotrophic Lateral Sclerosis with different phenotypes  
Dr Francesca Bianchi

**GEN-03** GBA gene variants are associated with cognitive impairment in ALS  
Professor Adrianio Chio’

**GEN-04** ALS-associated KANK1 and BNC2 mutations cause neurotoxicity and TDP-43 mislocalization  
Dr Tobias Moll

**GEN-05** UNC13A contains a TDP-43-regulated cryptic exon that is exacerbated by ALS/FTD-linked genomic variants  
Mr Oscar Wilkins

**GEN-06** Motor cortex communicate degeneration via exosome mediated signaling, very early in ALS  
Dr Mukesh Gautam

**GEN-07** Mutations in the SPTLC1 gene are a cause of juvenile amyotrophic lateral sclerosis  
Dr Ruth Chia

**IVT-01** POSTER WITHDRAWN

**IVT-02** Effects of ALS-associated tRNA-derived small RNAs on the proteomic profile of primary neurons in vitro  
Ms Elisabeth Jirstöm

**IVT-03** Differential Crosstalk of Optineurin and TDP-43 in Myeloid Cells in Steady State Versus Inflammation  
Miss Nikolina Prtenjaca

**IVT-04** HNRNPA1 isoforms differentially regulate the transcriptome: potential implications for the immune response and ALS  
Mrs Jade-Emmanuelle Deshaies

**IVT-05** No evidence for LRK2 inducing pathological Thr175 tau phosphorylation associated with CTE-ALS  
Mr Neil Donison

**IVT-06** Shipment of transduced live iPSC-derived motor neurons  
Miss Yasmin Hamwi

**IVT-07** POSTER WITHDRAWN

**IVV-01** Investigating TDP-43 in the cerebellum of non-transgenic and TDP-43 mouse models throughout aging.  
Mrs Tilly Baldacchino

**IVV-02** Green tea catechins and cocoa flavanols have beneficial effects on aging-associated regressive changes in the mouse neuromuscular system  
Mrs Silvia Gras

**IVV-03** POSTER WITHDRAWN

**IVV-04** TDP-43 pathology causes differential expression of retrotransposons in a TDP-43-Q331K mouse model  
Ms Shreevidya Konada

**IVV-05** Inhibiting C1q improves compound muscle action potential and reduces neurodegenerative damage in the SOD1G93A mouse model  
Dr Yaisa Andrews-Zwilling

**IVV-06** Molecular and cellular pathways important for maintaining the health of corticospinal motor neurons that lack Als in function  
Professor Hande Ozdinler

**IVV-07** Susceptibility of C9orf72 Knockout Mice to Excitotoxicity  
Mr Belay Gebrereggers

**IVV-08** Tongue denervation atrophy and dysphagia penetrate, but not overall survival, are affected by limb phenotype in a mouse model of ALS  
Ms Rebecca Thompson

**HCB-01** How TDP-43 condensation modulates its RNA processing  
Dr Martina Hallegger

**HCB-02** Dysfunctional nucleocytoplasmic transport dynamics in amyotrophic lateral sclerosis and frontotemporal dementia caused by mutation in C9orf72  
Mrs Marie-Therese Salcher-Konrad

**HCB-03** SOD1 metalation is required for the differentiation and survival of early neural progenitors  
Dr Kyle Denton

**HCB-04** The time course and impacts of TDP-43 loss on stathmin-2 gene expression, protein abundance, Golgi apparatus morphology, neurite outgrowth, and response to proteotoxic stress in human induced pluripotent derived motor neurons  
Ms Taylor Gray

**HCB-05** Neuronal STING Activation in Amyotrophic Lateral Sclerosis  
Dr Christine Marques

**HCB-06** Extracellular vesicles derived from ALS patient skin fibroblasts enhanced wound healing in vitro  
Mr Vincent Clément

**BIO-01** Not just STMN2 - hunting for TDP-43 cryptic biomarkers in ALS/FTD neuronal tissue  
Mx Anna-Leigh Brown

**BIO-02** GSR and SOD1: Oxidative stress biomarkers in ALS and FTD patients  
Miss Laura Exposito-Blazquez

**BIO-03** Parkin Level in Plasma of ALS Patients  
Dr Aslihan Gunel

**BIO-04** miRNA biomarkers for diagnosis of ALS and FTD, developed by a nonlinear machine learning approach  
Ms Nancy Yacovzada

**BIO-05** Plasma derived small and large extracellular vesicles showed different immune phenotypes in patients with Amyotrophic Lateral Sclerosis.  
Dr Daisy Sproviero

**BIO-06** Biomarkers for Patient Stratification and Target Engagement in ALS Patients with TDP-43 Pathology  
Dr Sandy Hinckley

**BIO-07** RNS60 increases mitochondrial oxidative metabolism in skeletal muscle of healthy volunteers  
Dr William Rooney

**BIO-08** Rescue of ALS relevant biomarkers by VRG0304 in rNLS8 mouse model  
Ms Ekaterina Stomakhina

**TST-01** Histone deacetylation inhibition regulates lipid homeostasis in a mouse model of ALS  
Dr Thibaut Burg

**TST-02** Unravelling perturbed TDP-43 autoregulation in vitro and in vivo: routes to therapy for ALS-FTD  
Dr Michael Niblock

**TST-03** POSTER WITHDRAWN

**TST-04** Multi-path direct current stimulation increases survival in SOD1-G93A mice  
Professor Zaghloul Ahmed

**TST-05** Suppression of RNA splicing factors as a therapeutic strategy to address familial and sporadic ALS  
Dr Justin Ichida
TST-06 Utilizing spatial-omics to study SOD1 mRNA knockdown in lumbar motor neurons after intra-cisterna magna delivery of an AAV gene therapy vector for SOD1-SOD1 in cytomolgus macaques
Mr Nilesh Pande

TST-07 RIPK1 is elevated in ALS patient spinal cords and RIPK1 kinase inhibition delays ALS disease progression in the SOD1G93A mouse model
Mr Matija Zelic

IMG-01 First-recruited motor units adopt a faster phenotype in amyotrophic lateral sclerosis
Dr James Bashford

IMG-02 Resting state fMRI correlates of pseudobulbar syndrome in Amyotrophic Lateral Sclerosis (ALS)
Dr Giulia D’Alvano

IMG-03 Cognitive dysfunction evaluated by the Edinburgh Cognitive and Behavioural ALS Screen (ECAS) correlates with the 18F-FDG-PET metabolic patterns in Amyotrophic Lateral Sclerosis (ALS)
Mrs Juliette Foucher

IMG-04 PAS induced recovery of intracellular inhibition in patients with ALS
Dr Alexandra Lackmy-Vallee

IMG-05 Brain TSPO-PET imaging shows no notable glial activation alterations in a SOD1-ALS cohort
Mr Austin Lewis

Dr Ram Miller

CLT-01 RNS60 in ALS: Expanded Access Program
Ms Grace Addy

CLT-02 The REFALS-ES open-label extension study of oral levosimendan in people with ALS
Dr Stephen Apple

CLT-03 Pharmacokinetis and Bioequivalence of an Investigational Oral Formulation of Edaravone (MT-1186) in Patients With Amyotrophic Lateral Sclerosis
Dr Robert Glanzman, MD FAA

CLT-04 An Open-Label Trial of Clenbuterol in People with ALS
Professor Richard Bedlack

CLT-05 COVID-19 Mitigation Strategies Utilized in the Radicava/Edaravone Findings in Biomarkers from ALS (REFINE-ALS) Study
Dr James Berry

CLT-06 An Assessment of the ALSFRS-R by the ALS Community: A Mixed-Methods Study
Dr Danielle Boyce

CLT-07 Longitudinal comparison of self-reported ALSFRS-R and ROADS questionnaires in people with ALS
Dr Katherine Burke

CLT-08 Can bias and discrimination impact the ALS/MND patient experience?
Dr Chelsey Carter

CLT-09 Successful launch of the HEALEY ALS Platform Trial during the COVID-19 pandemic: protocol amendments and operational changes to make the trial ‘COVID-resilient’ and ensure robust enrollment and high data quality
Ms Marianne Chase

CLT-10 Relationship between quantitative strength changes and functional outcomes in the phase 2 FORTITUDE-ALS Trial
Dr Bill Jacobsen

CLT-11 Design of FOCUS-C9, an adaptive Phase 1b/2a randomized controlled trial of WVE-004 in patients with C9orf72-associated ALS or FTD
Dr Kenechi Ejbe

Dr David Ernst

CLT-13 IC14 in ALS: Expanded Access Program
Mr Dario Gelevski

CLT-14 RESCUE-ALS Trial: A Phase 2, Randomized, Double-Blind, Placebo-Controlled Study of CNM-Au8 to Slow Disease Progression in Amyotrophic Lateral Sclerosis
Dr Robert Glanzman, MD FAA

CLT-15 Update of COURAGE-ALS: A Phase 3, Double-Blind, Randomized, Placebo-Controlled, Study to Evaluate Efficacy and Safety of Reldesemtiv in Patients with ALS
Dr Stacy A Rudnicki

DSP-01 Speech and pause measures as acoustic biomarkers of ALS in Canadian French
Dr Luciane Bouvier

DSP-02 Assessment of wearable sensors for estimation of natural gait speed at home and in the lab
Meghan Lukac

DSP-03 Using Active Digital Phenotyping to Quantify Function and Cognition in Amyotrophic Lateral Sclerosis (ALS)
Ms Zoe Scheier

COG-01 Cognitive Endophenotypes in ALS
Mr Emmet Costello

COG-02 ‘It refocuses the mind on the important things in life’ – An exploration of burden and self-described positive experiences of informal ALS caregivers in Ireland and the Netherlands.
Dr Miriam Galvin

COG-03 Theory of Mind deficits in Amyotrophic Lateral Sclerosis: a cross sectional population based study.
Dr Francesca Palumbo

COG-04 A scoping review of the literature to inform psychological support interventions for informal caregivers of people with motor neuron disease
Ms Rebecca Stoakes

COG-05 Application of executive function composite score (UDS3-EF) in a cohort of ALS-FTD spectrum patients.
Ms Morayl Portley

CMS-01 Overnight oximetry detects respiratory dysfunction earlier in ALS
Dr Sara Doyle

CMS-02 Tongue measurements and oral intake level in patients with ALS
Miss Milena Magalhães Augusto

CMS-03 ThinkALS – A user-friendly and comprehensive ALS diagnosis and referral tool for general neurologists
Dr Suma Babu

CMS-04 Veterans with ALS and Suicidal Ideation: A Community Created Intervention
Ms Mandi Bailey

CMS-05 A Clinical Bulbar Scale for ALS/MND (C-BAS): Preliminary Validation
Professor Laura Ball

CMS-06 Applying a clinical algorithm on real-world Electronic Medical Record (EMR) data for patient risk stratification of undiagnosed Amyotrophic Lateral Sclerosis (ALS)
Dr Taha Bandukwala

CMS-07 Impact of established respiratory home care protocols on the care of the Motor Neuron Disease patients during the COVID-19 pandemic
Mrs Paula Brockenbrough

CMS-08 The Association of Passive Smartphone Mobility Measures and Communicative Participation in ALS
Dr Kathryn Connaghan

CMS-09 Improving Online Caregiver Training for ALS and Complex Frail Patients Using Design-Build in Italy
Mr Silverio F. Conte

CMS-10 Novel respiratory therapy combining inspiratory muscle strength training and air stacking in patients with amyotrophic lateral sclerosis: videofluoroscopic findings in the upper airway
Mrs Alessandra Dorca

CMS-11 Oral health status of ALS patients: a single-center observational study
Miss Júlia Dourado

CMS-12 ALS Hope: A patient-created online dashboard of pre-symptomatic ALS research studies to better connect potential trial participants and the scientific community
Mr John Glasgow
Wednesday 8 December 2021

**LIVE POSTER SESSION B**

12.15 – 13.45

**EPI-05 Development of a web application for monitoring progress of patients with MND**
Mr Jinweii Benedict Ho

**EPI-06 Research of amyotrophic lateral sclerosis plus syndrome in South China**
Ms Pan Liu

**EPI-07 Incidence and Prevalence of Motor Neurone Disease in South Australia**
Mr Jackson Luker

**EPI-08 Clinical characteristics of a large Motor Neuron Disease cohort in Portugal: exploring differences from 1994 to 2020**
Mrs Inês Alves

**GEN-08 Altered circular RNA expression and circular RNA-microRNA interactions in Amyotrophic Lateral Sclerosis**
Dr Samuel Brennan

**GEN-09 Identifying small and large genonic variants in a small MND family using innovative bioinformatics pipelines**
Miss Sandrine Chan Moi Fat

**GEN-10 Novel TARDBP missense mutation caused familial amyotrophic lateral sclerosis with frontotemporal dementia and parkinsonism**
Dr Sheng Chen

**GEN-11 Discovery of structural variants in amyotrophic lateral sclerosis using long read sequencing**
Dr Jannah Shamsani

**GEN-12 Mitochondrial genome variations are associated with amyotrophic lateral sclerosis in patients from mainland China**
Professor Junling Wang

**GEN-13 Low-dose interleukin-2 as an immune-modulatory therapeutic strategy for ALS**
Miss Ilaria Giovannelli

**GEN-14 Amyotrophic lateral sclerosis in three asymptomatic Val50Met TTR gene carriers**
Dr Claudia Santos Silva

**IVV-08 Axonal protein, calretinin, stimulates microglia to produce chemokines associated with clinical severity of ALS**
Dr Shintaro Hayashi

**IVV-09 A molecular platform for the rapid functional study of oligogenic ALS candidate genes**
Miss Sharlynn Wu

**IVT-08 POSTER WITHDRAWN**

**IVT-09 Characterising a novel mouse model of ALS: examining senataxin pathology in ALS4**
Ms Charlotte Kremers

**IVT-10 POSTER WITHDRAWN**

**IVT-11 Identification of six oxidative stress response-modifying drugs from an FDA approved library using a high throughput ESC-derived motor neuron survival screen.**
Dr David Gordon

**IVT-12 Therapeutic potential of Naringenin on primary microglia derived from mutant G93A-SOD1 mice**
Mr Thomas Gschwendtberger

**IVT-13 Protein HNRNPPH localises to cytoplasmic stress granules and nuclear G4C2 foci in C9orf72 Amyotrophic lateral sclerosis in vitro model**
Miss Urša Čerček

**IVV-10 Early accumulation of misfolded SOD1 in motor neurons determines vacuolar degenerative, parapopitic-like, changes involving the expression of extracellular vesicles and necrotic markers**
Miss Sara Salvary

**HCB-07 Transcriptome profiling of peripheral blood and pTDP-43 pathology-staged central nervous system tissue in sporadic amyotrophic lateral sclerosis**
Miss Natalie Grima

**HCB-08 Iron pathways are perturbed and accumulation overlaps with a shifted lipid profile in the CNS of human MND cases**
Dr James Hilton

**HCB-09 Impaired NHEJ repair in amyotrophic lateral sclerosis is associated with TDP-43 mutations**
Dr Anna Konopka

**HCB-10 Gliarial ferroptosis causes non-cell autonomous neuronal death in ALS**
Dr Jeff Liddell

**HCB-11 Dipetide repeat protein toxicity and its contribution to DNA damage, nucleolar stress and heterochromatin dysregulation in ALS patients with underlying C9orf72 repeat expansions**
Ms Sophie Imhof

**HCB-12 Proteins binding RNA transcripts from C9orf72 gene mutation**
Professor Boris Rogelj

**HCB-13 Characterising ALS transgenic mouse disease mouse model**
Mrs Megan Dubowsky

**TST-08 Effects of antiretroviral therapy on motor behaviour, TDP-43 proteinopathy and immune response in a motor neuron disease mouse model**
Mr Ulf Kläppe

**TST-09 POSTER WITHDRAWN**

**TST-10 POSTER WITHDRAWN**

**TST-11 Identification of Arfaptin-2 as a potential therapeutic target for Amyotrophic Lateral Sclerosis (ALS) using iPSC-derived motor neurons and zebrafish as models of ALS**
Miss Anushka Bhargava
TST-12 MTBVAC vaccine mediates immune response through the upregulation of T-regulatory cells in an ALS mouse model. Dr Laura Moreno-Martinez

TST-13 Experimental conditions modify the therapeutic effect of 5-Fluorouracil in the SOD1G93A model of ALS. Dr Miriam De La Torre

TST-14 Tracking protein aggregation in lymphoblasts from ALS patients with a turbidometric assay: A drug screening platform Miss Carlota Tosat-Bitrián

IMG-07 POSTER WITHDRAWN

IMG-08 Neuroimaging Reveals that ALS-FTD and ALS Are Not on a Continuum Dr Venkateswaran Rajagopalan

IMG-09 Cross Frequency Coupling Analysis In Amyotrophic Lateral Sclerosis Resting-State EEG Miss Cristina Benetton

IMG-10 Peripheral nerve diffusion tensor imaging as a marker of axonal degeneration in ALS Dr Lorenzo Gualco

IMG-11 18F-FDG-PET correlates of aging and disease course in ALS as revealed by distinct PVC approaches. Dr Thanuja Dharmadasa

IMG-12 Coil Orientation Influences Threshold-Tracking Transcranial Magnetic Stimulation Measures of ALS Pathophysiology Dr Raisin McMackin

CLT-16 Clinical trial of bosutinib for amyotrophic lateral sclerosis: Induced pluripotent stem cell-based Drug Repurposing for Amyotrophic Lateral Sclerosis Medicine (iDReAM) study Professor Haruhsia Inoue

CLT-17 MERIDIAN: A phase 2, randomized, double-blind, placebo-controlled, multicenter study to evaluate the efficacy and safety of pegcetacoplan in patients with amyotrophic lateral sclerosis Professor Ammar Al-Chalabi

CLT-18 Factors Influencing Trial Participation in Motor Neuron Disease (FIT-Participation in MND) Miss Emily Beswick

CLT-19 A French national network to improve organization and inclusion in clinical trials: Alliance on Clinical Trials for ALS-MND (ACT4ALS-MND) Dr Gaëlle Bruneteau

CLT-20 Long-Term Survival Analysis from Masiitinib Early Access Named Patient Program Dr Jesus S Mora

CLT-21 Global Phase 3, Randomized, Placebo-Controlled Trial of a Fixed-Dose Coformulation of Sodium Phenylbutyrate and Taurursodiol in Amyotrophic Lateral Sclerosis (A3S-004 PHENIX): Study Design Overview Professor Leonard van den Berg

CLT-22 PrimeC as a Novel Therapeutic Strategy for ALS Treatment Dr Shiran Zimri

DSP-04 Natural history and clinical characteristics of ALS in Taiwan Dr Kang-Yang Jih

DSP-05 Features of the ALS patients population of a large center in central Italy Dr Lucrezia Becattini

DSP-06 Higher Troponin T levels positively correlated with the extent of body regions affected on EMG in ALS patients. Dr Sanharib Chamoun

DSP-07 POSTER WITHDRAWN

DSP-08 Measurement of Upper Limb Function in ALS: Current Methods and Future Directions Mr Conor Hayden

DSP-09 Development of phenotype-specific prognostic models in motor neuron diseases Dr Virginia Iacobelli

DSP-10 Gauging ALS patients stratifications using a surrogate validity indicator: An empirical study. Mr Mohamed Chiheb Karray

COG-06 Plasma uric acid helps predict cognitive impairment in patients with amyotrophic lateral sclerosis Mrs Jahui Tang

COG-07 Brainstem correlates of pathological laughter and crying frequency in ALS Dr Sicong Tu

COG-08 Vascular risk factors decrease the risk of cognitive impairment in amyotrophic lateral sclerosis: a case-control study Ms Tianmi Yang

COG-09 Exploring the Psychological Support Preferences of Informal Carers of People with Motor Neuron Disease Mr Joseph Breten

COG-10 ‘Seeing my wife gradually deteriorate and knowing where it is going makes me sad’ - A multi-centre, exploratory study of burden and difficulties of informal ALS caregivers. Miss Eilis Conroy

COG-11 Exploring potential markers of pre-dementia risk states in motor neuron diseases: a longitudinal study of mild behavioral impairment and its relation to cognition Dr Pilar Maria Ferraro

COG-12 POSTER WITHDRAWN

COG-13 A role of psychological distress/trauama in ALS etiopathology? Dr Emanuele Pick

COG-14 Genetic counselling regarding diagnostic genetic testing for ALS and FTD: results of a modified Delphi consensus survey Ms Ashley Crook

COG-15 Diagnostic Utility of Gold Coast Criteria in Amyotrophic Lateral Sclerosis Dr Andrew Hannaford

COG-16 Trends in communication board use by amyotrophic lateral sclerosis patients in Japan Mr Takemasa Ishikawa

CMS-17 A new measure of disease severity of amyotrophic lateral sclerosis by conversion of forced vital capacity Dr Yuko Kobayakawa

CMS-18 Neurprotective Hormone Levels in ALS; A Cross-Sectional Study Dr Hemangi Sane

CMS-19 Study of the visual pathway with diffusion tensor imaging and cognition in patients with amyotrophic lateral sclerosis Mrs Yuan Yang

CMS-20 Information of patients from ongoing post-marketing surveillance, evaluating the real-world safety and effectiveness of edaravone for amyotrophic lateral sclerosis patients in Japan (SUNRISE Japan) Mr Kenta Yoshimura

CMS-21 Predictors of the need for Non-Invasive Ventilation (NIV) during gastrostomy insertion in patients living with Motor Neurone Disease (MND) Mr Abdismad Ali

CMS-22 Respiratory interventions in a population-based ALS cohort: demographics and survival determinants Professor Andrea Calvo

CMS-23 Delayed diagnosis and diagnostic pathway of ALS patients in Portugal: where can we improve? Dr Catarina Campos

CMS-24 User-centred design and testing of a bespoke online toolkit (www.NIV4MND.co.uk) for healthcare professionals learning about non-invasive ventilation in motor neuron disease. Miss Orla Canavan

CMS-25 Self-administered ALSFRS-R on the Telehealth in MND (TiM) system – initial evaluation of validity in Irish users Mr Simon Carty

CMS-26 “It’s a big nugget of information that I don’t know what to do with”: Information and support needs of people living at an increased genetic risk of MND. Miss Jade Howard
### SESSION 3

**METABOLISM AND NUTRITION**

*Chairs: B Dickie (UK) M Turner (UK)*

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<tr>
<td>14.00 – 14.25</td>
<td>C6</td>
<td>Optimising nutrition for people living with ALS</td>
<td>C McDermott (UK)</td>
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<td>14.25 – 14.40</td>
<td>C7</td>
<td>The combined study of gut microbiota and metabolomics of early-stage ALS patients</td>
<td>Zhenxiang Gong (China)</td>
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<td>14.40 – 14.55</td>
<td>C8</td>
<td>Elevated levels of HDL-cholesterol at diagnosis are associated with shorter survival in patients with ALS</td>
<td>M Janse van Mantgem (Netherlands)</td>
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**Parallel Session**

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### SESSION 4

**CELL BIOLOGY AND PATHOLOGY**

*Chairs: J Kirby (UK) N Cole (UK)*

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<tr>
<td>15.25 – 15.50</td>
<td>C9</td>
<td>Dysfunction to proteostasis mechanisms in ALS/FTD</td>
<td>J Atkin (Australia)</td>
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<td>15.50 – 16.05</td>
<td>C10</td>
<td>Sporadic ALS disease initiation and targeted therapy: Nuclear accumulation of CHMP7 initiates nuclear pore complex injury and subsequent TDP-43 dysfunction in sporadic and C9orf72 ALS</td>
<td>J Rothstein (USA)</td>
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<td>16.05 – 16.20</td>
<td>C11</td>
<td>Perivascular fibroblasts activity precedes the onset of ALS neurodegeneration with high plasma SPP1 associated with short patient survival</td>
<td>S Lewandowski (Sweden)</td>
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<td>16.20 – 16.35</td>
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<td>Discussion/Questions</td>
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**Parallel Session**

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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
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<tbody>
<tr>
<td>16.35 – 16.50</td>
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<td>Break</td>
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## SESSION 5

### AUTONOMY AND DECISION MAKING

**Chairs:** C Faull (UK) A Al-Chalabi (UK)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Topic</th>
<th>Presenter(s)</th>
<th>Room</th>
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<tbody>
<tr>
<td>16.50 – 17.15</td>
<td>C12</td>
<td>Medical assistance in dying in Switzerland</td>
<td>H Gudat (Switzerland)</td>
<td>C12</td>
</tr>
<tr>
<td>17.15 – 17.30</td>
<td>C13</td>
<td>Discussing personalised prognosis of survival in ALS: A qualitative study of experiences of patients, caregivers and physicians</td>
<td>R van Eenennaam (Netherlands)</td>
<td>C13</td>
</tr>
<tr>
<td>17.30 – 17.45</td>
<td>C14</td>
<td>IMPACT ALS Europe – a European survey of people living with ALS</td>
<td>M Heverin/M Galvin (Ireland)</td>
<td>C14</td>
</tr>
<tr>
<td>17.45 – 18.00</td>
<td></td>
<td>Discussion/Questions</td>
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</table>
# Thursday 9 December 2021

## SESSION 6

**DISEASE MODELS**

*Chairs: R Patani (UK) N Cole (UK)*

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
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</thead>
<tbody>
<tr>
<td>14.00 – 14.25</td>
<td>C15</td>
<td>PSCs as a model for neurodegeneration disease: Myths and truths</td>
<td>L Studer (USA)</td>
<td>14.00 – 14.45 Industry Sponsored Event (non-CME)</td>
</tr>
<tr>
<td>14.25 – 14.40</td>
<td>C16</td>
<td>ALS drug discovery using AI platform with patient iPSC panel</td>
<td>K Imamura (Japan)</td>
<td></td>
</tr>
<tr>
<td>14.40 – 14.55</td>
<td>C17</td>
<td>Cortical hyperexcitability causes TDP-43 proteinopathy</td>
<td>B Turner (Australia)</td>
<td></td>
</tr>
<tr>
<td>14.55 – 15.10</td>
<td></td>
<td>Discussion/Questions</td>
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</table>

### BREAK

**15.10 – 15.25**

## SESSION 7

**TRANSLATING RESEARCH FROM TARGETS TO TRIALS**

*Chairs: A Al-Chalabi (UK) R Mead (UK)*

<table>
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<th>Time</th>
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<th>Title</th>
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</thead>
<tbody>
<tr>
<td>15.45 – 16.05</td>
<td>C19</td>
<td>How important are biomarkers in drug development?</td>
<td>R Bowser (USA)</td>
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<tr>
<td>16.05 – 16.25</td>
<td>C20</td>
<td>Do platform trials fulfil the needs of industry?</td>
<td>R Roubenoff (USA)</td>
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<tr>
<td>16.25 – 16.40</td>
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<td>Discussion/Questions</td>
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</table>

### BREAK

**16.40 – 16.50**
16.50 – 18.20

**LIVE POSTER SESSION C**

**EPI-09 Incidence of Motor Neuron Disease in People of Bangladeshi, Indian and Pakistani Ethnicity in England 1998 - 2019: A Longitudinal Cohort Study**
Dr Judith Burchardt

**EPI-10 Increased ALS Risk in Manual Workers: a Case-Control Study in the Isolated Island Population of Malta**
Professor Ruben Cauchi

**EPI-11 Amyotrophic lateral sclerosis mortality in Latin America: A population based meta-analysis.**
Miss Daniells Erazo

**EPI-12 Characterising the ageing human motor system in the UK Biobank**
Dr Matt Gabel

**EPI-13 ALSrisk – a case-control study for biomarker, environmental and lifestyle factors in amyotrophic lateral sclerosis in Stockholm**
Ms Jenny Hellqvist

**GEN-15 A new missense mutation in ATXN2 gene (c.2860C>T) in an ALS patient with aggressive disease phenotype: case report**
Dr Andrea Ghezzi

**GEN-16 Is ALS an oligogenic disease? Insights from an Italian population-based cohort**
Dr Maurizio Grassano

**GEN-17 POSTER WITHDRAWN**

**GEN-18 Investigating the role of cytoplasmic dynein 1 in motor neuron disease through changes in gene expression**
Mr Conor Mckiernan

**GEN-19 POSTER WITHDRAWN**

**GEN-20 POSTER WITHDRAWN**

**IVT-14 Co-culture of iPSC-derived motor neurons and microglia as a novel in vitro model of ALS**
Dr Bjorn Friedhelm Vahsen

**IVT-15 FUS-ALS mutants induce alterations in RBPs phase-separation and protein translation in spinal motor neurons.**
Dr Nicol Birsan

**IVT-16 GRASPS: a novel translomte technology reveals omics-hidden disease-associated pathways in a human TDP-43 ALS-inducible cell model**
Dr Ya-Hui Lin

**IVT-17 Effect of C9ORF72-NEK1 double mutation on DNA damage response in patient-derived iPSC-motoneurons**
Mrs Serena Santangelo

**IVT-18 Rapid generation of motor neurons using modified NgN2 induced iPSC's to study ALSdisease**
Mr Erika Norabuena

**IVT-20 POSTER WITHDRAWN**

**IVV-15 Specific localization of the Y172-related protein in cholinergic synapses on motoneurons and in Schwann cells: its relevance in damaged motoneurons**
Miss Aliaq Gatus

**IVV-16 LncRNAs associated with neuronal development and oncogenesis are deregulated in SOD1-G93A murine model of Amyotrophic Lateral Sclerosis**
Ms Federica Rey

**IVV-17 In-vivo Chronic Treatment of Ligand Targeting GPR17 Affects Survival and Disease Progression in SOD1G93A Mice**
Mrs Thi Phuong Nhung Nguyen

**IVV-18 Stathmin-2 dependent maintenance of adult motor and sensory neurons**
Dr Jone Lopez-Erauskin

**IVV-19 POSTER WITHDRAWN**

**IVV-20 Exploring Optogenetic Stimulation of the Hypoglossal Nucleus to Preserve Tongue Structure and Function in a Mouse Model of ALS**
Mr Brenden Stealey

**IVV-21 Characterization of aged mice as an in vivo model for ALS drug discovery**
Dr Nngzhe Zhang

**HCB-13 POSTER WITHDRAWN**

**HCB-14 Profiling neuroinflammatory signatures of disease heterogeneity in C9orf72 post-mortem tissue**
Ms Olivia Rifai

**HCB-15 Translating Ribosome Affinity Purification (TRAP) In Induced Pluripotent Stem Cell-derived Motor Neurons (iPSC-MNs) of Amyotrophic Lateral Sclerosis (ALS) Patients with the C9orf72 Mutation**
Dr Yinya Xu

**HCB-16 hnRNP A1B, a splice variant of HNRNPA1, is spatially and temporally regulated**
Miss Myriam Gagne

**HCB-17 Loss-of-function in the ALS gene NEK1 disrupts nucleocytoplasmic transport that can be rescued by microtubule stabilization**
Dr Elizabeth Daley

**HCB-18 Chlorovirus exposure detected in ALS patients through serum antibodies was also found to accelerate motor deterioration in SOD1G93A transgenic mice**
Dr Gary Pattee

**HCB-19 Peripheral inflammatory markers in Amyotrophic Lateral Sclerosis: a pilot analysis.**
Dr Fabiola De Marchi

**HCB-20 Red cell distribution width (RDW) in ALS correlates with quantitative Amyotrophic Lateral Sclerosis: a pilot analysis.**
Dr Gary Pattee

**HCB-21 HERV-K (HML-2) levels in ALS**
Dr Vittoria Lombardi

**HCB-22 Age-dependent increase of cytoskeletal components in peripheral sensory nerve fibers in human skin**
Ms Klara Metzner

**HCB-23 Aberrant enteric neuromuscular system and microbiome in amyotrophic lateral sclerosis**
Professor Jun Sun

**HCB-24 POSTER WITHDRAWN**

**TST-15 A cell-penetrant peptide blocking C9ORF72-repeat RNA export nuclear export suppresses neurodegeneration**
Dr Lydia Castelli

**TST-16 Pharmacologically Induced Increase in Telomerase ExpressionDelayed The Onset and the Progression of ALS in Animal Models**
Professor Esther Priel

**TST-17 AS-202, a potent and safe PIKfyve suppressing antisense oligonucleotide therapy for familial and sporadic ALS**
Dr Wen-Hsuan Chang

**TST-18 CRISPR/Cas9-Mediated Excision of ALS/FTD-Causing Hexanucleotide Repeat Expansion in C9ORF72 rescues major disease mechanisms in vivo and in vitro**
Dr Katharina Meijboom

**TST-19 Disruption of Neuregulin Signaling in Microglia Stops Disease Progression SOD1 Mice**
Professor Fei Song

**TST-20 RACK1 knockdown alleviates TDP-43 and FUS proteinopathy and associated global translational suppression in vitro, and neurodegeneration in vivo.**
Dr Beibei Zhao

**TST-22 Age-related increase of the cytoskeletal component of peripheral sensory nerve fibers**
Ms Jenny Hellqvist

**TST-23 Aberrant enteric neuromuscular system and microbiome in amyotrophic lateral sclerosis**
Professor Jun Sun

**TST-24 POSTER WITHDRAWN**

**IMG-14 Cortical thickness in Amyotrophic Lateral Sclerosis correlates with quantitative disease progression**
Mrs Nora Dieckmann
IMG-15 Whole-body fasciculation detection in ALS using novel MR imaging
Miss Linda Heskamp

IMG-16 Sensitivity and Specificity of the EL-Escorial, Awaji-Shima and Gold Coast criteria in the diagnosis of Motor Neuron Disease/Amyotrophic Lateral Sclerosis: implications for research and clinical practice
Mr Arunachalam Soma

IMG-17 A multifactorial facial surface EMG framework as an objective assessment tool for detecting and measuring bulbar involvement in ALS
Dr Panying Rong

IMG-18 Cortical thinning in multiple motor speech production areas in ALS
Dr Ana Zaninotto

CLT-23 Interim Results From the MT-1186-A01 Phase 3, Open-Label, Multicenter Safety Study of Oral Edaravone Administered Over 48 Weeks in Subjects With Amyotrophic Lateral Sclerosis
Dr Angela Genge

CLT-24 A Randomized, Open-Label, Crossover-Design, Single-Dose Phase 1 Study to Investigate the Safety, Tolerability, and Comparative Bioavailability of Investigational Oral Edaravone Administered Orally and via a Nasogastric Tube in Healthy Adult Subjects (MT-1186-Z-101)
Dr Antoinette Harrison

CLT-25 Efficacy and safety of RIPK1 inhibitor SAR443820 in adult participants with amyotrophic lateral sclerosis (ALS): Phase 2 Study Design
Dr Merit Cudkowicz

CLT-26 REAS-1: A randomized, double-blind, parallel group, single centre, phase 1b/2 study to assess the safety, tolerability, pharmacokinetics and pharmacodynamics of three orally administered doses of enoxacin in adults with Amyotrophic Lateral Sclerosis
Dr Hannah Kaneb

CLT-27 Combat-ALS Phase 2b/3 trial of Mn-166 (Ibudilast) In ALS: Trial update
Dr Malath Makhay

CLT-28 The Morris ALS Principles: A Multi-Stakeholder Framework for Patient-Driven Research
Ms Sandy Morris

CLT-29 Biomarker Assays Utilized in the Radiacava/Edaravone Findings in Biomarkers from ALS (REFINE-ALS) Study
Dr Sally Nelson

CLT-30 A Phase 2 Safety and Tolerability Study of an Anti CD40LG Antibody, AT-1501 in Adults with ALS
Dr Steve Perrin

CLT-31 Lived Experience of Persons with Amyotrophic Lateral Sclerosis Who Are Participating in a Clinical Trial (Work in Progress)
Ms Natalie Saunders

CLT-32 Study Design for a Phase 3, Multicenter, Open-Label, Safety Extension Study of Investigational Oral Edaravone Administered Over 96 Weeks in Patients with ALS (MT-1186-A03)
Mr Daniel Selness

CLT-33 ALS clinical trial engagement: perspectives from patients and healthcare staff at one institution in the Midwest (United States)
Dr Andrea Swenson

CLT-34 A composite endpoint for ALS clinical trials based on patient preference: Patient-Ranked Order of Function (PROOF)
Dr Ruben van Eijk

CLT-35 Overview of the Healey Center’s Expanded Access Protocol Programs for Investigational Treatments in Amyotrophic Lateral Sclerosis
Ms Allison Winter

CLT-36 Grip Strength is More than a Number: The Relationship Between Grip Strength and Fine Motor and Arm Function in FORTITUDE-ALS
Dr Andrew A. Wolff

DSP-11 Reprogrammed ALS patient astrocytes reveal aberrant mitochondrial activity as a potential biomarker for therapeutic response to CuATSM.
Dr Cassandra Dennyx

DSP-12 Variation in Age of Onset and Disease Progression Among Genetic Subsets of Amyotrophic Lateral Sclerosis (ALS) Patients: Results From a Real-World Point-in-Time Survey
Ms Laisar O’Callaghan

DSP-13 Can Amyotrophic Lateral Sclerosis progression really pause? A cohort study using the Medical Research Council scale
Dr Rosario Vasta

COG-14 Clinical features at onset and longitudinal trajectories of decline in MND patients with cognitive-behavioral impairment
Dr Ester Gervino

COG-15 The incidence of depression and quality of life in caregivers of patients with amyotrophic lateral sclerosis in Germany and Poland.
Dr Anna Maksymowicz-Sliwińska

COG-16 Exploring the acceptability of CALM, an online self-help psychological intervention for people with MND and family members
Miss Cathryn Pinto

COG-17 ALS Focus Caregiver Needs Survey Results: What Matters Most to ALS Caregivers
Dr Sarah Parvanta

COG-18 Subjective health perception prioritizes psychological well-being over physical function as ALS advances.
Mr Nimish Thakore

CMS-28 Exploring the inclusivity of telehealth for people living with motor neuron disease, and the validity of a telehealth version of the ALFSRS-R
Mr Morgan Harold

CMS-29 Interpreting the Meaning of Existence for the Person with Motor Neurone Disease and their Family Carer(s)
Dr Denise Andrea Harris

CMS-30 The complexity of planning care at a multidisciplinary motor neurone disease (MND) clinic.
Ms Polly Kennedy

CMS-31 POSTER WITHDRAWN

CMS-32 “More than a ‘patient advocacy’ organization”: Patient-centred perspectives of non-profit ALS/MND health charities
Professor Wendy Johnston

CMS-33 Measuring sleep and well being in caregivers: Data from a study of children and youth carers in ALS/MND
Dr Melinda S. Kavanaugh

CMS-34 Measuring self-reported fatigue in people with ALS
Ms Mackenzie Keegan

CMS-35 Impact Of Occupational Therapy Services Delivered Via Telehealth To Patients With Amyotrophic Lateral Sclerosis
Dr Amanda Lazo

CMS-36 Anthropometry and body composition for nutritional and prognostic evaluation of patients with amyotrophic lateral sclerosis
Professor Lucia Leite-Lais

CMS-37 A Feasible and Safe Alternative: Radiologically Inserted Gastrostomy with Limited Sedation for People with Amyotrophic Lateral Sclerosis
Dr Carolina Parra Cantu

CMS-38 Remote cough monitoring for predicting bulbar and respiratory impairment
Dr Bridget Perry

CMS-39 ALS telehealth in a multidisciplinary service in Natal, Brazil
Mrs Glauciane Santana

CMS-40 Genetic Testing Experiences in a Tertiary ALS Center
Dr Lauren Tabor Gray

CMS-45 Multimodal dialog based speech and facial biomarkers capture differential disease progression rates for ALS remote patient monitoring
Mr Vikram Ramanarayanan
Friday 10 December 2021

LIVE POSTER SESSION D

12.15 – 13.45

EPI-14 Thyroid disease in Portuguese amyotrophic lateral sclerosis patients: a case-control study
Dr Claudia Santos Silva

EPI-15 Exploring the natural history data captured using telehealth in routine clinical practice
Mr James Sutherland

EPI-16 Assessing the role of blood pressure in amyotrophic lateral sclerosis: a Mendelian randomization study
Ms. Kailin Xia

EPI-17 Is the pathogenic Androgen Receptor CAG repeat expansion underestimated in the general population?
Dr Matteo Zanovello

EPI-18 Identification of ALS slow progressors through the Emilia Romagna regional registry: a possible target population for biomarker studies
Miss Elisabetta Zucchi

GEN-21 Study on the frequency of ATXN2, NOP56, AR and C9orf72 repeat expansions in patients with ALS from mainland China
Ms xiaorong hou

GEN-22 Gene4MND: an integrative genetic database and analytic platform for motor neuron disease
Ms Zhen Liu

GEN-23 An integrative pipeline for the discovery of novel genomic structural variation in amyotrophic lateral sclerosis
Dr Emily McCann

GEN-24 Structural variants in SNCA may increase propensity for protein aggregation in amyotrophic lateral sclerosis
Mr Brad Roberts

GEN-25 Genetic and functional analysis of GLT8D1 in Taiwanese patients with amyotrophic lateral sclerosis
Dr Pei-Chien Tsai

GEN-26 Genotype-phenotype analysis of Amyotrophic Lateral Sclerosis with Intronic Mutations of TBK1 gene
Professor Zhangyu Zou

IVT-21 Establishing ALS patient fibroblasts from skin biopsies and evaluation of ALS-relevant cellular pathology – a comparative study
Dr Shu Yang

IVT-22 A Rapid High Throughput Method for Screening Presynapse-restoring Compounds
Dr Nori Yumoto

IVT-23 Blood-Brain Barrier Human ‘in vitro’ model as a reliable tool for therapeutic validations
Miss Ana Aragon Gonzalez

IVT-24 Restoring ER-mitochondria tethering rescues TDP-43 linked damage to calcium signaling
Dr Andrea Markovinović

IVT-25 The effects of M337V TDP-43 on cellular energy metabolism and axonal transport in embryonic stem cell-derived motor neurons
Miss Emily Carroll

IVT-26 Autophagy dysfunction in C9orf72-mediated ALS and FTD
Miss Livvy Houghton

IVT-27 FUS interacts with NUDT21 and decreases its nuclear expression
Dr Helena Motaln

IVT-28 Loss of C9orf72 function impairs the peripheral neuromuscular system in mice
Miss Sophie Badger

IVT-29 POSTER WITHDRAWN

HCB-19 Axonal growth impairment in motor neurons with TARDPB mutations were mediated by PHOX2B downregulation
Dr Shio Mitsuzaa

HCB-20 Characterising the composition and structure of myelin in ALS patients using post-mortem tissue.
Ms Gemma Sadler

HCB-21 Identification of a novel, de novo pathogenic variant in an individual with amyotrophic lateral sclerosis
Mr Phillip West

HCB-22 iPS-C-derived motor neurons from C9orf72 ALS/FTD-patients display defects in lysosomal function and homeostasis
Mr Jimmy Beckers

HCB-23 POSTER WITHDRAWN

HCB-24 High-resolution imaging of synapse density in ALS brain and its association with clinical presentation
Miss Anna Sanchez Avila

BIO-25 Urinary neopterin: a novel biomarker of disease progression in motor neuron disease/amyotrophic lateral sclerosis
Dr Stephanie Shepheard

BIO-26 Diagnostic value of plasma neurofilament light: A multicentre validation study
Dr Ahmad Al Khlefat

BIO-27 Mixed modeling blood biomarkers-based to predict progression rate in motor neuron disease
Dr Paolo Bongioanni

BIO-28 Comparison of markers of inflammation and neurodegeneration in cerebrospinal fluid as predictors of survival in patients with amyotrophic lateral sclerosis
Mr Maxim De Schaepdryver

BIO-29 Role of the neurovascular unit and of the redox state in Amyotrophic Lateral Sclerosis pathogenesis. Modulatory effects elicited by acetyl-L-carnitine
Professor Elena Grossini

BIO-30 Circulating miR-181 is a prognostic biomarker for amyotrophic lateral sclerosis
Dr Iddo Magen

BIO-31 POSTER WITHDRAWN

Miss Alanis Lima

TST-22 POSTER WITHDRAWN

TST-23 Cell Penetrating Peptides facilitate the Delivery of Precision Medicines to the Brain and Spinal Cord for the Treatment of Neurological Disease
Dr Iant He Pitout
TST-24 POSTER WITHDRAWN

TST-25 Pridopidine activation of the Sigma-1 receptor enhances impaired nucleocytoplasmic transport and autophagy in a cellular model of ALS
Dr. Michal Geva

TST-26 Potential therapies for ALS using non-viral nanovectors for efficient TDP-43 siRNA delivery
Mrs Annamaria Russo

IMG-19 The Split-Elbow Index: A biomarker of the split elbow sign in ALS
Dr Nathan Pavey

IMG-20 Direct demonstration of cortical dysfunction in ALS using TMS-EEG
Dr Mehdi van den Bos

IMG-21 Amyotrophic Lateral Sclerosis with SOD1 mutations shows distinct brain metabolic changes
Dr Antonio Canosa

IMG-22 Preliminary evidence of neurophysiological changes in asymptomatic carriers of the C9orf72 gene mutation using EEG
Mr Stefan Dukic

IMG-23 Magnetic resonance imaging of the spinal cord provides a marker of the rate of progression in ALS patients
Dr Mohammed KHAMAYSYA

IMG-24 Association of motor unit loss derived from CMAP scans and functional scores of patients with suspected motor neuron diseases
Mr Diederik Stikvoort

IMG-25 The effects of background audio-visual processing on the TMS measures of cortical excitability for biomarker research in ALS.
Ms Yasmine Sarah Tadjine

CLT-37 Safety and efficacy of dimethyl fumarate in ALS: randomized controlled study
Professor Steve Vucic

CLT-38 Enabling effective public involvement: a case study of involvement in the HighCALS research programme
Mr Dan Beever

CLT-39 An exploration of the minimally important difference in ALSFRS-R score for patients
Dr Sarah Bobby

CLT-40 Development and evaluation of a patient reported outcome in amyotrophic lateral sclerosis (PRO-ALS)
Mr Adriaan de Jongh

CLT-41 RNS60 and ALS: biological and clinical effects
Dr Elisabetta Pupillo

CLT-42 Using a patient-based registry as a pre-screening tool for ALS trials: the role of vital capacity
Miss Therese Wellander

DSP-14 MND, or not only? THAT is a question.
Dr Mariam Kekenadze

DSP-15 Patterns of longitudinal cognitive and behavioural change in ALS/MND
Dr Caroline McHutchison

DSP-16 Differentiation between MND phenotypes: the role of clinical features at the time of diagnosis
Dr Giuseppe Meo

DSP-17 Spreading pattern in ALS patients with respiratory onset
Professor Susana Pinto

DSP-18 ALS subgroups based on neurophysiological measurements of functional motor tasks
Mr Vladoslav Sirekko

DSP-19 Monitoring progressive loss of walking ability in amyotrophic lateral sclerosis using Timed Up and Go test
Dr Eglė Sukokiene

DSP-20 Beta2-integrin CD11b-expressing monocytes and disease progression in amyotrophic lateral sclerosis
Dr Ozlem Yildiz

COG-19 Schizotypal traits across the frontotemporal dementia–motor neuron disease spectrum: pathomechanistic insights
Miss Nga Yan Tse

COG-20 Efficacy of a mindfulness intervention for people with motor neurone disease and their family caregivers: comparison of those with high and low depression
Dr Sarah Velissaris

COG-21 Clinical relevance of dysgraphic features in western non-aphasic ALS patients
Dr Edoardo Nicolò Aiello

COG-22 “Mental” component of fatigue correlates with cognitive and behavioral impairment in Amyotrophic Lateral Sclerosis
Mr Fabrizio Canale

COG-23 Perceived social isolation is associated with neurobehavioral functioning in patients with ALS
Dr Monica Consonni

COG-24 Current practices of using mental capacity assessments in the clinical care of MND patients in the UK
Miss Debbie Gray

COG-25 Prominent upper motor neuron dysfunction is associated with the presence of behavioural impairment in patients with amyotrophic lateral sclerosis
Dr Alessio Maranzano

COG-26 Towards family-centered ALS care: Development of a guide for ALS care professionals on how to support parents and children in families living with ALS
Dr Marion Sommers-Spijkerman

COG-27 Parkinsonism in ALS: an exploratory study
Dr Edoardo Nicolò Aiello

COG-28 Amyotrophic lateral sclerosis with the presence of behavioural neurologic signs
Dr Sara Vila

COG-29 ALS and motor neuron dysfunction is associated with the presence of the COVID-19 pandemic on how to support parents and children in families living with ALS
Professor Susana Pinto

COG-30 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-31 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-32 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-33 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-34 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-35 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-36 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-37 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-38 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-39 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-40 Cognitive and functional motor tasks in patients with motor neuron disease: a real-world study in 212 patients
Dr Caroline McHutchison

COG-41 The Italian version of the Rasch-Built Overall Amyotrophic Lateral Sclerosis Disability Scale (ROADS): a validation study
Dr Umberto Manera

COG-42 A multicentre evaluation of saliva management in people with MND (ProSec3 study)
Prof Chris McDermott

CMS-49 POSTER WITHDRAWN

CMS-50 The end of life: a description of the perimortem period in Swedish ALS patients
Dr Stefan Sennfalt

CMS-51 The clinical saliva score for MND: a validated tool for monitoring saliva symptoms
Dr Rebecca Simpson

CMS-52 Information needs and preferences in ALS patients in the Netherlands
Dr Maurit Sloats

CMS-53 Experience and Usability of Mechanical Insufflation Exsufflation and Breath Stacking in Amyotrophic Lateral Sclerosis
Ms Rachel Tattersall

CMS-54 The composite measure of arterial blood gases and respiratory symptoms is predictive of pulmonary function tests in amyotrophic lateral sclerosis.
Dr Maria Claudia Torrieri

CMS-55 Development of the OptiCALS nutritional support intervention for people with Amyotrophic Lateral Sclerosis
Mr Sean White

CMS-48 Salivary gland radiotherapy for sialorrhea treatment in Amyotrophic Lateral Sclerosis patients: a real world study in 212 patients
Professor Pierre-François Pradat
## SESSION 8
### COGNITIVE CHANGE

**Chairs:** E Mioshi (UK) B Dickie (UK)

<table>
<thead>
<tr>
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<th>Title</th>
<th>Speaker</th>
<th>Parallel Session</th>
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<tbody>
<tr>
<td>14.00 – 14.25</td>
<td><strong>C21</strong> Measuring cognitive change in ALS/MND</td>
<td>S Abrahams (UK)</td>
<td>14.00 – 14.45 Industry Sponsored Event (non-CME)</td>
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<tr>
<td>14.25 – 14.40</td>
<td><strong>C22</strong> Cognitive and neuropsychiatric endophenotypes among asymptomatic relatives from C9orf72 repeat expansion kindreds</td>
<td>M Ryan (Ireland)</td>
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<tr>
<td>14.40 – 14.55</td>
<td><strong>C23</strong> Non-motor impairment across the ALS-FTD spectrum: factors that influence disease severity and progression</td>
<td>E Devenney (Australia)</td>
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<tr>
<td>14.55 – 15.10</td>
<td><strong>Discussion/Questions</strong></td>
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**15.10 – 15.25 BREAK**

## SESSION 9
### CLINICAL MANAGEMENT

**Chairs:** C McDermott (UK) A Al-Chalabi (UK)

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Parallel Session</th>
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<tbody>
<tr>
<td>15.25 – 15.50</td>
<td><strong>C24</strong> The Diagnostic Pathway in ALS: Can we do better?</td>
<td>O Hardiman (Ireland)</td>
<td>15.25 – 15.55 Networking Function</td>
</tr>
<tr>
<td>15.50 – 16.05</td>
<td><strong>C25</strong> Patterns of genetic testing among patients with ALS: real-world results from the United States and Europe</td>
<td>K Stenson (USA)</td>
<td></td>
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<tr>
<td>16.05 – 16.20</td>
<td><strong>C26</strong> Reliability and feasibility of unsupervised vital capacity testing at home in patients with MND</td>
<td>J Helleman (Netherlands)</td>
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<tr>
<td>16.20 – 16.35</td>
<td><strong>Discussion/Questions</strong></td>
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**16.35 – 16.50 BREAK**
**SESSION 10**

**CLOSING SESSION**

*Chairs: B Dickie (UK) A Al-Chalabi (UK)*

<table>
<thead>
<tr>
<th>Time</th>
<th>Session/Event</th>
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<tbody>
<tr>
<td>16.50 – 16.55</td>
<td>Invitation to San Diego 2022</td>
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| 16.55 – 17.15   | **C27** Gene therapy: Prospects and pitfalls  
L Bruijn (UK)    |
| 17.15 – 17.35   | **C28** Technology to empower living with ALS/MND  
S Gleason (USA)  |
| 17.35 – 17.45   | Discussion/Questions                                                          |
| 17.45 – 18.05   | Healey Center International Prize for Innovation in ALS  
Lalji Family ALS Endowed Award |

**Late Breaking News**

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<th>Time</th>
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| 1805 – 1820     | RESCUE-ALS: A Phase 2, randomized, double-blind, placebo-controlled study of CNM-Au8 to slow disease progression in ALS  
S Vucic (Australia) |
|                 | Evaluating the efficacy and safety of Tofersen in adults with ALS and a SOD1 mutation: Results from the Phase 3 VALOR Trial and its Open-Label Extension  
T Miller (USA)   |
| 18.20 – 18.35   | Final thoughts                                                                           |
Frequently Asked Questions (FAQ)

How do I login to the platform?
Approximately 5 days prior to the Symposium you will receive an email with your login details for the virtual platform, as well as instructions on how to login. We will also be sending out reminders on each morning of the Symposium. If you do have any issues logging into the virtual platform on the day, please use the ‘Support’ icon in the bottom righthand corner of the login page.

How do I update my contact details and sharing preferences?
Once you are signed into the virtual platform, please click on your profile photo at the top right of the screen and select ‘My Settings’. Here you can review and update your profile, photo and privacy settings. To choose what information you share in the meeting hub, scroll to the bottom of ‘My Settings’ and select the information you are happy to share with other attendees.

How do I navigate the timeline?
Sessions and functions that are happening each day are listed in the timeline in chronological order. You can click on any of the items in the timeline to view session information and join the session or function. Once you are in a session, always use the ‘Back to timeline’ button to get back to the homepage.

What is the Meeting Hub?
The Meeting Hub allows you to connect and communicate with other attendees. Once you have found an attendee you want to connect with, click the Connect button. Once the other attendee accepts your request, you can choose to interact with your connection by starting a live chat or live video call. You can also schedule to meet at a future time, send messages and take notes. Contact information for all attendees you have connected with be included when you export your contacts (see the Exporting your Notes and Contacts for additional information).

What is the Exhibitor Hall?
You can visit ‘Exhibitor Hall’ at any time of the day. Here, you can search and browse through the list of exhibitors. Clicking on the View Button lets you review the Exhibitor’s Information and download any available brochures. You can also choose to connect with members of the Exhibitor team via Meeting Hub. If the exhibition is open and the exhibitor’s staff are online, you can request a live meeting and you will be placed in a queue. You can always see your position in the queue and when you reach the top of the queue a video meeting with the selected member of the exhibitor’s team will begin.

What is a Live Poster Session?
During the Live Poster Sessions, you will be able to browse and search for poster presentations that interest you. Click on the Poster Presentation to find out more information and enter to view the live presentation. When the presenter adds you to their presentation, your microphone will be unmuted. You can mute and unmute your microphone at any time if you wish to interact and ask the author questions.

Where do I go for technical support?
The quickest way to talk to us is by clicking on the red ‘Support’ icon in the top right of the screen. Our Support Team will be online and available to you.

What if I miss a session?
Don’t worry if you miss a session, all sessions will be available to watch on-demand the day after they have aired until 10 March 2022.

Will I receive a certificate of attendance?
Certificates of attendance will be emailed to all delegates after the conference has ended.
Exhibitors

AMYLYX
Apellis
Biogen
brainstorm cell therapeutics
Cytokinetics
Ezekiel art
Mitsubishi Tanabe Pharma
MND Association
With grateful thanks to the following supporters of the 32nd International Symposium on ALS/MND
Join us in San Diego, California
7 - 9 December 2022

Provisional abstract submission deadline: Thursday 28 July 2022

For further information please contact:
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