



# 34th international symposium on ALS/MND

6-8 December 2023

Basel, Switzerland and online



Host: Verein ALS Schweiz

Organised by the Motor Neurone Disease Association

# PROGRAMME

# 34th international symposium on ALS/MND



## Organiser of the Symposium



### Motor Neurone Disease Association

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## Host for the Symposium



### Verein ALS Schweiz

Margarethenstrasse 58,  
4053 Basel, Switzerland

Tel: +41 44 887 1720

[www.als-schweiz.ch](http://www.als-schweiz.ch)

## Held in co-operation with



INTERNATIONAL ALLIANCE  
OF ALS/MND ASSOCIATIONS

International Society for  
Frontotemporal Dementias

## CME Accreditation

The 34th International Symposium on ALS/MND has been approved by the Federation of the Royal Colleges of Physicians of the United Kingdom for 18 category 1 (external) CPD credits.

### **Grüezi! Bonjour! Benvenuto! Allegra! A very warm welcome!**

It's the first time in over thirty years that the International Symposium on ALS/MND has come to Switzerland. With this conference, the MND Association offers the largest annual conference dedicated to ALS and MND research. Wherever our community congregates, you'll find an unparalleled spirit. People from all over the world come together in support of our common cause: a world free of ALS/MND. Whether we are in Boston, Dublin, Perth or Basel: our purpose is always to learn from and to inspire each other – in a powerful exchange between professionals. At the ALS Association Switzerland, our main cause is seeking to improve the quality of life of people with ALS and their loved ones as best we can.

When delegations from Switzerland and 16 countries met in the UK in November 1992 to found the International Alliance of ALS/MND Associations, their goals were as follows: raising global awareness, sharing information on managing the condition, supporting and coordinating global research, creating a global identity and improving quality of care. Our community shares those very same aims to this day. We are deeply committed to supporting people with the condition and their loved ones and meeting the needs of specialists and experts in the field. Discovered 150 years ago, the condition remains terminal. Every year, all over the world, it leaves in its wake those people who suffer this awful fate – and others who are forced to look on while a loved one loses their life. So I think it is right and vital that we have stuck to these goals. This means that we persevere and persist even when the road is hard and the journey to our destination is longer than we would have hoped.

You currently find yourselves in the heart of Europe, in a country often mistaken for Sweden, on account of its name. But Switzerland is 10 times smaller than Sweden. And over 200 times smaller than the USA. Switzerland is also a country in four parts, each with its own language and culture: German-speaking and French-speaking Switzerland, Italian-speaking Ticino, and the canton of Grisons, where some people speak Romansh, the fourth official language of Switzerland. While our cultures are very diverse, we have decided to take them as inspiration and – in the spirit of the wider whole – to bring together the very best from every corner of our country. We are honoured to have you pay us a visit. I see this occasion as an opportunity to tap into the diversity of our community and achieve our utmost in pursuit of our common cause. With that, I wish you a very warm welcome here in Switzerland!

**Walter Brunner**

President, ALS Association Switzerland

Welcome to the 34th International Symposium on ALS/MND, which at last, after the remote meetings of the last three years, is being held in person. The symposium is taking place in the beautiful city of Basel, and I hope you will have the chance to explore, while experiencing the buzz of an in-person conference.

Switzerland is famous for several medical discoveries relevant to neuroscience. The mind-altering drug LSD, being trialled as a treatment in psychotherapy and for migraine was discovered here. Antihistamines, used for saliva control in motor neuron disease were discovered by the Swiss Nobel prize-winner Bovet, along with sulfa antibiotics and muscle relaxants. But perhaps my favourite two Swiss contributors are Paracelsus, who developed an oral formulation of opium and is regarded as one of the founders of modern medicine, and Friedrich Miescher, who in 1869, discovered DNA. Paracelsus was regarded as unconventional at the time, but his persistence allowed him to advance medical science. Miescher did not at first realize the significance of his discovery but by building on it, we now have incredible advances in medicine. We can see that the biggest steps forward may come from unexpected approaches or appear unimportant at first. Finding effective therapies for ALS/MND is a challenging task but we are making progress through science, and there are many examples of apparently small steps amplifying up into significant changes in our understanding.

This year, among the usual strong representations of genomics, proteomics, cell biology, and clinical care, four important themes are biomarkers, clinical trials, the role of the immune system, and cognitive change. Our knowledge in each of these areas is maturing rapidly and being applied directly into the search for successful treatment, galvanised by advances over the last 12 months. The symposium brings hope, excitement and new vision to take back to our clinics and laboratories. I wish you a very informative and enjoyable meeting.

**Ammar Al-Chalabi**

Programme Committee Chair

# Wednesday 6 December

## SESSION 1

### JOINT OPENING SESSION



Location: San Francisco

Chairs: A Al-Chalabi (UK) and T Curry (UK)

#### 08.30 – 08.35

Welcome

A Al-Chalabi (UK) and T Curry (UK)

#### 08.35 – 08.45

Welcome from Host Association/Dignitary

#### 08.45 – 09.30

C1 Stephen Hawking Memorial Lecture: Mapping the CNS: From cells to networks for movement

R Costa (USA)

#### 09.30 – 10.00

International Alliance Forbes Norris Award

#### 10.00 – 10.20

IPG Award and winner's research presentation

## 10.30 – 11.00

### REFRESHMENTS, NETWORKING AND EXHIBITORS

Location: Level 2 Foyer

## SESSION 2A

### GENETICS AND GENOMICS



Location: San Francisco

Chairs: J Kirby (UK)

M van Es (Netherlands)

#### 11.00 – 11.30

C2 Exploring the non-coding genome

J Quinn (UK)

#### 11.30 – 11.45

C3 The oligogenic structure of ALS

A Iacoangeli (UK)

#### 11.45 – 12.00

C4 Genome-wide paired DNA-RNAseq analyses to discover intronic splice mutation hotspots in neurological disorders

Y Wang (Netherlands)

#### 12.00 – 12.15

C5 Genetic and epigenetic investigation of survival modifiers in Chinese ALS

M Zhang (China)

#### 12.15 – 12.30

C6 An IGFBP7 promotor SNP is associated with the ALS Reversal phenotype

E Rampersaud (USA)

## SESSION 2B

### RESPIRATORY ASSESSMENT AND MANAGEMENT

Location: Singapore

Chairs: S Pinto (Portugal)

A Geronimo (USA)

#### 11.00 – 11.20

C7 Identifying needs in ALS respiratory care using weekly monitoring of pulmonary function

A Geronimo (USA)

#### 11.20 – 11.40

C8 Improving measurement of lung function in ALS: the results of the Pulmonary Function via Impedance Tomography (PuFIT)

C McIlduff (USA)

#### 11.40 – 12.00

C09 Calculated maximal volume ventilation (cMVV) as a marker of early respiratory failure in ALS

U Manera (Italy)

#### 12.00 – 12.15

C10 Factors associated with emergency tracheostomy or early mortality in a population-based study of 170 subjects with ALS/MND

P Cazzolli (USA)

#### 12.15 – 12.30

C11 Giving breath to motor neurons: Non-invasive mechanical ventilation slows disease progression in ALS

M Grassano (Italy)

## SESSION 2C

### PERSPECTIVES ON ALS AND FTD: PHENOTYPES AND NEUROIMAGING

Location: Montreal

Chairs: J van Swieten (Netherlands)

M Turner (UK)

#### 11.00 – 11.05

Introduction

J van Swieten (Netherlands)

#### 11.05 – 11.45

C12 Clinical/cognitive phenotypes in ALS and FTD: You say tomatoes...

S Abrahams (UK) and J Rohrer (UK)

#### 11.45 – 12.25

C13 Neuroimaging in ALS and FTD

J Kassubek (Germany) and H Rosen (USA)

#### 12.25 – 12.40

Discussion

## 12.30 – 14.00

### LUNCH

Location: Event Halle

## SESSION 3A

### IN VIVO MODELS



Location: San Francisco

Chairs: C Bendotti (Italy)  
C Lutz (USA)

#### 14.00 – 14.30

**C14** Mouse Models and Resources for ALS – What Models to use, when and why

C Lutz (USA)

#### 14.30 – 14.45

**C15** Severity of impaired motor unit recovery in ALS-associated KIF5A variant mice is inversely related to total soluble KIF5A protein levels

S Kolb (USA)

#### 14.45 – 15.00

**C16** Linking mechanisms of protein aggregation to neurodegeneration in vivo – the critical role of posttranslational modifications for condensate formation and aggregation of human TDP-43

M Morsch (Australia)

#### 15.00 – 15.15

**C17** TARDBP Knock-In Zebrafish Models Display a Motor Phenotype and Present with Some Pathological Hallmarks of ALS

G Armstrong (Canada)

#### 15.15 – 15.30

**C18** Reorganization of central carbon metabolism rescues TDP-43 proteostasis collapse in spinal motor neurons

K Asakawa (Japan)

## SESSION 3B

### TECHNOLOGY AND TELEMEDICINE

Location: Singapore

Chairs: T Meyer (Germany)  
E Hobson (UK)

#### 14.00 – 14.30

**C19** Harnessing collaborative innovation to enhance quality of life in ALS/MND

S Moss (UK)

#### 14.30 – 14.45

**C20** Longitudinal remote monitoring of nocturnal physiology in people living with ALS

M Crook-Rumsey (UK)

#### 14.45 – 15.00

**C21** Evaluation of digital technologies for home-based assessment of people with ALS

A Mueller (Switzerland)

#### 15.00 – 15.15

**C22** Clinical use and comparative analysis of the self-explanatory ALS Functional Rating Scale (ALSFRS- R-SE) in a controlled multicenter study

A Maier (Germany)

#### 15.15 – 15.30

**C23** Site and participant perspectives on participating in an ALS trial designed to reduce burden:

COURAGE-ALS

S Rudnicki (USA)

## SESSION 3C

### PERSPECTIVES ON ALS AND FTD: BIOMARKERS, TRIALS AND PRODROMAL DISEASE

Location: Montreal

Chairs: R Bowser (USA)  
J Rohrer (UK)

#### 14.00 – 14.30

**C24** Fluid biomarkers in ALS and FTD

M Turner (UK)

J van Swieten (Netherlands)

#### 14.30 – 15.00

**C25** Prodromal ALS and FTD

M Benatar (USA)

C McMillan (USA)

#### 15.00 – 15.30

**C26** Therapeutic trials in ALS and FTD

L van den Berg (Netherlands)

A Boxer (USA)

#### 15.30 – 16.00

### REFRESHMENTS, NETWORKING AND EXHIBITORS

Location: Level 2 Foyer



## SESSION 4A

### CELL BIOLOGY AND PATHOLOGY



Location: San Francisco

Chairs: J Atkin (Australia)  
H Durham (Canada)

#### 16.00 – 16.20

**C27** Dysregulated lipid metabolism is an early contributor to neurodegeneration in C9orf72 ALS/FTD

*A Cammack (UK)*

#### 16.20 – 16.40

**C28** Disruption of the angiopoietin-like protein system correlates with lipid homeostasis in ALS

*S Krishnamurthy (Canada)*

#### 16.40 – 17.00

**C29** Transcriptomic analysis of amyotrophic lateral sclerosis patient brain regions with differential pTDP-43 neuropathology

*N Grima (Australia)*

#### 17.00 – 17.15

**C30** UNC13A Loss and TDP-43 Dependent Mis-splicing Drives Synaptic Dysfunction in FTD and ALS

*S Hinckley (USA)*

#### 17.15 – 17.30

**C31** TDP-43 subcellular mislocalisation is correlated with loss of optineurin binding for FTD and ALS-associated TBK1 missense variants

*C Dobson-Stone (Australia)*

## SESSION 4B

### CAREGIVERS AND FAMILIES

Location: Singapore

Chairs: K Schweikert (Switzerland)  
M Galvin (Ireland)

#### 16.00 – 16.30

**C32** Informal caregiving in ALS: Difficulty and benefit

*M Galvin (Ireland)*

#### 16.30 – 16.45

**C33** Making end of life decisions about home mechanical ventilation: Patient and family perspectives

*E Wilson (UK)*

#### 16.45 – 17.00

**C34** Health communication guidance for the ALS disease course: Evidence from patient and family focus groups and ALS healthcare professionals. Outcomes of the ALS Talk Project

*W Johnston (Canada)*

#### 17.00 – 17.15

**C35** What, how and when do families communicate about ALS? A qualitative exploration of parents' and children's perceptions

*M Sommers-Spijkerman (Netherlands)*

#### 17.15 – 17.30

**C36** Factors predicting anticipatory grief in family carers currently supporting people living with MND

*A Trucco (UK)*

## SESSION 4C

### PERSPECTIVES ON ALS AND FTD: PATHOLOGY, MODELS AND TARGETS

Location: Montreal

Chairs: M Strong (Canada)  
C McMillan (USA)

#### 16.00 – 16.30

**C37** Genetics, pathology and selective vulnerability in ALS and FTD

*M Neumann (Germany)*

#### 16.30 – 17.00

**C38** ALS-FTD: Models and therapeutic targets

*A Isaacs (UK)*

#### 17.00 – 17.30

**C39** Gene therapy strategies for ALS and FTD

*C Shaw (UK)*

#### 17.30 – 17.45

Discussion

## POSTER SESSION A

Location: Event Halle

### Part 1 - 17.45 – 18.45

**Theme 1** Epidemiology and Informatics

**Theme 5** Human Cell biology and Pathology

**Theme 8** Clinical imaging and electrophysiology

**Theme 11** Cognitive and Psychological assessment and support

### Part 2 - 18.45 – 19.45

**Theme 4** In Vivo Experimental Models

**Theme 10** Disease Stratification and Phenotyping of patients

Biomedical Work in Progress

07.00 – 08.30

## NON-CME INDUSTRY BREAKFAST SESSION

Learnings in ALS over the last 10 years

For more information about our non-CME industry sessions, please visit [www.symposium.mndassociation.org](http://www.symposium.mndassociation.org)

Location: Sydney

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### SESSION 5A

## PROTEOSTASIS AND PROTEOTOXICITY

Location: San Francisco

Chairs: J Robertson (Canada)  
M Hasegawa (Japan)

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08.30 – 09.00

**C40** Prion-like properties of ALS associated proteins

M Hasegawa (Japan)

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09.00 – 09.15

**C41** Phosphorylation alters TDP-43 protein-protein interactions and aggregation

E Kellett (Australia)

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09.15 – 09.30

**C42** Cyclin F influences the proteostasis of TDP-43

S Rayner (Australia)

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09.30 – 09.45

**C43** Identifying synaptic interactors of FUS reveals novel functions

S Taconelli (UK)

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09.45 – 10.00

**C44** The neuroanatomical distributions and morphologies of SOD1 inclusions segregate into different patterns in ALS patients carrying SOD1 mutations

K Forsberg (Sweden)

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### SESSION 5B

## NUTRITIONAL ASSESSMENT AND MANAGEMENT



Location: Singapore

Chairs: F Steyn (Australia)  
H Stavroulakis (UK)

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08.30 – 08.50

**C45** A multi-centre evaluation of the post-gastrostomy management in patients with MND (PostGas)

T Stavroulakis (UK)

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08.50 – 09.10

**C46** Tube feedings: Assessment of the decision making for patients with ALS

K Tran (USA)

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09.10 – 09.30

**C47** Higher glycemic index diet is associated with slower disease progression in ALS

I Lee (USA)

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09.30 – 09.45

**C48** Investigating the role of anthropometric measurements to assess nutritional state in MND: a pilot study

S Roscoe (UK)

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09.45 – 10.00

**C49** Central pathways of appetite control in MND: fMRI evidence of altered brain responses to visual food stimuli

J Chang (Australia)

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### SESSION 5C

## NON-CME INDUSTRY SESSION

Navigating ALS diagnosis in Europe: a multi-country perspective to improve patient journey

For more information about our non-CME industry sessions, please visit [www.symposium.mndassociation.org](http://www.symposium.mndassociation.org)

Location: Montreal

08.30 – 10.00

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10.00 – 10.30

## REFRESHMENTS, NETWORKING AND EXHIBITORS

Location: Level 2 Foyer

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## SESSION 6A

### PRECLINICAL THERAPEUTIC STRATEGIES

Location: San Francisco

Chairs: L Bruijn (Switzerland)  
F Menzies (UK)

#### 10.30 – 10.45

**C50** Modulation of the mevalonate pathway restores TDP-43-mediated STMN2 deficiency

*M Nolan (USA)*

#### 10.45 – 11.00

**C51** Antisense oligonucleotides rescue UNC13A expression after TDP-43 loss of function

*M Keuss (UK)*

#### 11.00 – 11.15

**C52** An intravenous AAV-RNAi approach targeting Atxn2 for sporadic ALS

*G Murlidharan (USA)*

#### 11.15 – 11.30

**C53** Development of an AAV gene therapy for C9orf72 ALS by targeting the repeat expansion containing C9orf72 transcripts

*Y Liu (Netherlands)*

#### 11.30 – 11.45

**C54** Novel peptides based on thioredoxins are protective in cellular, zebrafish and two mouse models of ALS

*J Atkin (Australia)*

#### 11.45 – 12.00

**C55** Therapeutic mitigation of the toxic phenotype induced by TDP-43 in animal models of ALS

*C Droppelman (Canada)*

#### 12.00 – 12.15

**C56** Novel pharmacological approaches in stimulating protein clearance for therapeutic targeting of cytoplasmic TDP-43 pathology in ALS models

*S Keating (Australia)*

#### 12.15 – 12.30

**C57** ATH-1105, a small molecule positive modulator of the neurotrophic hepatocyte growth factor system, is neuroprotective when administered prophylactically, therapeutically or in combination with riluzole in the prp-TDP-43 A315T mouse model of ALS

*K Church (USA)*

## SESSION 6B

### CLINICAL TRIALS



Location: Singapore

Chairs: L van den Berg (Netherlands)  
S Paganoni (USA)

#### 10.30 – 10.50

**C58** COURAGE-ALS: Results of the Phase 3 clinical trial of reldesemtiv in ALS

*J Shefner (USA)*

#### 10.50 – 11.10

**C59** Harnessing biomarkers to understand clinical outcomes in RCTs: The Modifying Immune Responses and Outcomes in ALS Study (MIROCALS)

*A Malaspina (UK)*

#### 11.10 – 11.30

**C60** Pridopidine for the treatment of ALS: Top line results from the Phase 2 Healey ALS platform trial

*J Shefner (USA)*

#### 11.30 – 11.50

**C61** Safety profile, biological and clinical effects of colchicine in ALS: Results from a Phase 2 multicenter, randomized controlled double-blind clinical trial

*J Mandrioli (Italy)*

#### 11.50 – 12.10

**C62** Two-year results from the open-label extension of VALOR: Tofersen in adults with SOD1 ALS

*M Cudkowicz (USA)*

#### 12.10 – 12.30

**C63** Results of a double blind, placebo-controlled clinical trial of AIT-101 (LAM-002A) in C9orf72 ALS: A biomarker driven Phase 2A clinical trial targeting PIKfyve inhibition

*S Babu (USA)*

#### 12.30 – 14.00

### LUNCH

Location: Event Halle

## SESSION 6C

### NEUROIMAGING

Location: Montreal

Chairs: J Grosskreutz (Germany)  
P-F Pradat (France)

#### 10.30 – 10.50

**C64** Along-tract texture analysis of magnetic resonance images in the corticospinal tract and corpus callosum in ALS

*P Parnianpour (Canada)*

#### 10.50 – 11.10

**C65** Defining the core white-matter disease signature of ALS through state-of-the-art diffusion-weighted imaging and fixel based analysis

*S Tu (Australia)*

#### 11.10 – 11.30

**C66** Brain connectome alterations across King's stages in ALS

*E Spinelli (Italy)*

#### 11.30 – 11.50

**C67** Use of brain 2-[18F]FDG-PET to discriminate ALS and ALS-mimics

*A Canosa (Italy)*

#### 11.50 – 12.10

**C68** A proof of mechanism study to evaluate the effect of sotuletinib (BLZ945) on neuroinflammation as measured by [11C]-PBR28 PET imaging in participants with ALS

*R Miller (Switzerland)*

#### 12.10 – 12.30

**C69** Premorbid brain structural variations influence risk of ALS

*A Thompson (UK)*



## SESSION 7A

### IMMUNITY, INFLAMMATION AND NEURODEGENERATION

Location: San Francisco

Chairs: F Song (USA)  
L Ferraiuolo (USA)

#### 14.00 – 14.30

**C70** Astrocyte-neuron interaction in health and disease

L Ferraiuolo (USA)

#### 14.30 – 14.45

**C71** Focal corticospinal tract degeneration below the brainstem of ALS patients suggests a dying back of upper motor neurons

H Cropper (USA)

#### 14.45 – 15.00

**C72** TBK1 loss-of-function is associated with cell autonomous microglial dysfunction

O Peters (UK)

#### 15.00 – 15.15

**C73** Type I interferon response propagates TDP-43 pathogenesis in ALS

C Yu (Australia)

#### 15.15 – 15.30

**C74** Single-cell RNA sequencing identifies a cytotoxic NK subpopulation associated with ALS

O Dols Icardo (Spain)

## SESSION 7B

### IMPROVING CLINICAL PRACTICE



Location: Singapore

Chairs: S Feldman (USA)  
M Ogino (Japan)

#### 14.00 – 14.20

**C75** Mapping the natural history of ALS: Time-to-event analysis of clinical milestones in the pan-European, population-based PRECISION-ALS cohort

H McDonough (Ireland)

A Puchades (Spain)

#### 14.20 – 14.40

**C76** A randomised controlled trial examining clinical and cost effectiveness of Acceptance and Commitment Therapy plus usual care for improving psychological health in people living with MND in comparison to usual care alone

R Gould (UK)

#### 14.40 – 15.00

**C77** A multicentre evaluation of excessive saliva management in people living with MND.

S Boddy (UK)

#### 15.00 – 15.15

**C78** Evidence-based consensus guidelines for ALS genetic testing and counselling

J Roggenbuck (USA)

#### 15.15 – 15.30

**C79** Quinine for the treatment of muscle cramps in ALS: A randomized placebo controlled double-blind cross-over trial

N Braun (Switzerland)

## SESSION 7C

### NON-CME INDUSTRY SESSION

Better diagnosis, treatments and quality of life for people living with MND: are we making an impact?

For more information about our non-CME industry sessions, please visit [www.symposium.mndassociation.org](http://www.symposium.mndassociation.org)

Location: Montreal

#### 14.00 – 15.30

#### 15.30 – 16.00

### REFRESHMENTS, NETWORKING AND EXHIBITORS

Location: Level 2 Foyer

## SESSION 8A

### TDP - 43

Location: San Francisco

*Chairs: M Hallegger (UK)  
M Polymenidou (Switzerland)*

#### 16.00 – 16.30

**C80** Does TDP-43 constitute a viable therapeutic target?

*M Polymenidou (Switzerland)*

#### 16.30 – 16.50

**C81** Molecular signatures of TDP-43 dysfunction are age dependent, variable, and therapeutically targetable in authentic sALS and C9orf72 ALS/FTD patient iPSCs

*A Coyne (USA)*

#### 16.50 – 17.10

**C82** Nuclear TDP-43 pathology detected by RNA aptamer is an early aggregation event that correlates with STMN-2 cryptic exon emergence and clinical phenotype

*J Gregory (UK)*

#### 17.10 – 17.30

**C83** Discovery and optimization of the first-in-class TDP-43 PET tracer

*E Vokali (Switzerland)*

## SESSION 8B

### COGNITIVE CHANGE



Location: Singapore

*Chairs: S Abrahams (UK)  
O Hardiman (Ireland)*

#### 16.00 – 16.15

**C84** Cognitive and behavioural impairment in ALS patients with TARDBP and SOD1 pathogenic variants: A domain analysis.

*A Chio (Italy)*

#### 16.15 – 16.30

**C85** ALS 'non-specific' cognitive impairment frequently occurs and remains unnoticed in ALS: development of a new cognitive screening tool.

*A Michielsen (Netherlands)*

#### 16.30 – 16.45

**C86** Directly measuring network function during social cognition in ALS using EEG during the Reading the Mind in the Eyes Task

*R McMackin (Ireland)*

#### 16.45 – 17.00

**C87** Cardiac autonomic dysfunction is associated with impaired cognition in patients with ALS

*Z Li (China)*

#### 17.00 – 17.15

**C88** Relationship between plasma uric acid, white matter microstructure and cognitive function in ALS patients

*J Tang (China)*

#### 17.15 – 17.30

**C89** correlates of frontotemporal spectrum disorders in a large Italian cohort on non-demented ALS patients

*B Poletti (Italy)*

## SESSION 8C

### NON-CME INDUSTRY SESSION

**Maintaining continuity of oral disease-modifying treatment by meeting the needs of people with ALS: challenges and expectations**

For more information about our non-CME industry sessions, please visit [www.symposium.mndassociation.org](http://www.symposium.mndassociation.org)

Location: Montreal

#### 16.00 – 17.30

## POSTER SESSION B

Location: Event Halle

### Part 1 - 17.45 – 18.45

**Theme 2** Genetics and Genomics

**Theme 9** Clinical Trials and Design

**Theme 12** Clinical Management and Support

### Part 2 - 18.45 – 19.45

**Theme 3** In vitro Experimental Models

**Theme 6** Tissue Biomarkers

**Theme 7** Pre-clinical therapeutic strategies  
Care Practice/Work in Progress

07.00 – 08.30

## NON-CME INDUSTRY BREAKFAST SESSION

Clinical Trials in ALS: What have we learned and where are the next opportunities?

For more information about our non-CME industry sessions, please visit [www.symposium.mndassociation.org](http://www.symposium.mndassociation.org)

Location: Sydney

### SESSION 9A

#### IV VITRO MODELS



Location: San Francisco

Chairs: K Talbot (UK)  
J Rothstein (USA)

08.30 – 09.00

**C90** Whole Genome Screen for Nuclear and TDP-43 Import Regulators in Human iPSC-derived Neurons

J Rothstein (USA)

09.00 – 09.15

**C91** C9orf72 patient-derived spinal cord organoids reveal key ALS phenotypes

L Loh (Australia)

09.15 – 09.30

**C92** Loss of TDP43 affects neuronal survival and differentiation in a human stem cell 3D model of the cerebral cortex

V Ramesh (UK)

09.30 – 09.45

**C93** Optogenetic stimulation reveals activity-dependent mechanisms of neurodegeneration in C9orf72-HRE ALS motor neurons and neuromuscular co-culture

L Farrimond (UK)

09.45 – 10.00

**C94** An optogenetic approach to recapitulate C9ORF72 DPR pathology in cellular models

R Hodgson (UK)

### SESSION 9B

#### CLINICAL MANAGEMENT

Location: Singapore

Chairs: J Bedford (UK)  
C Ingre (Sweden)

08.30 – 09.00

**C95** Standards of care in an era of multiple treatments

C Ingre (Sweden)

09.00 – 09.30

**C96** Developing guidelines for the management of cognitive and behavioural changes in ALS

E Mioshi (UK)

09.30 – 10.00

**C97** How to break the news in ALS/ MND: a primer for physicians and allied health professionals

M Kavanaugh (USA)

### SESSION 9C

#### TISSUE BIOMARKERS

Location: Montreal

Chairs: M Benatar (USA)  
A Malaspina (UK)

08.30 – 08.50

**C98** A robust microRNA ALS blood diagnostic test

S Banack (USA)

08.50 – 09.10

**C99** Deep proteomics of cerebrospinal fluid implicates endoplasmic reticulum and inflammatory mechanisms in aggressiveness of ALS

E Dellar (UK)

09.10 – 09.30

**C100** Proteomics and mathematical modelling of longitudinal CSF differentiates fast versus slow ALS disease progression

R Bowser (USA)

09.30 – 09.45

**C101** Lipid-mediated resolution of inflammation and survival in ALS

O Yildiz (UK)

09.45 – 10.00

**C102** Peripheral immunity relates to disease progression and prognosis in ALS

Q Jiang (China)

10.00 – 10.30

## REFRESHMENTS, NETWORKING AND EXHIBITORS

Location: Level 2 Foyer

## SESSION 10A

### TRANSCRIPTOMICS AND RNA BIOLOGY



Location: San Francisco

Chairs: M Ruepp (UK)  
P Wong (USA)

#### 10.30 – 11.00

**C103** TDP-43 dependent cryptic exons: Functional fluid biomarker and target validation

*P Wong (USA)*

#### 11.00 – 11.15

**C104** Lnc-HIBADH-4 regulates autophagy-lysosome pathway in amyotrophic lateral sclerosis by targeting CTSD

*J Huang (China)*

#### 11.15 – 11.30

**C105** Harnessing TDP-43 mediated feedback loops as novel diagnostic tools and for pathomechanistic insights

*M Hallegger (UK)*

#### 11.30 – 11.45

**C106** FUS is a global regulator of RNA methylation and ALS-FUS mutations disrupt this function at several levels

*T Shelkovernikova (UK)*

#### 11.45 – 12.00

**C107** Loss of ALS-linked SFPQ causes aberrant splicing and deregulation of RNA editing in human motor neurons

*G Tyzack (UK)*

#### 12.00 – 12.15

**C108** C9orf72 gene networks in the human brain correlate with cortical thickness in C9-FTD and implicate vulnerable cell types

*I Broce (USA)*

#### 12.15 – 12.30

**C109** Transcriptomic signatures of frontal cortex vulnerability in C9orf72 ALS and FTLT-TDP

*B Spencer (USA)*

## SESSION 10B

### CLINICAL STRATIFICATION AND ENDPOINTS

Location: Singapore

Chairs: M Weber (Switzerland)  
A Chiò (Italy)

#### 10.30 – 11.00

**C110** Stratification and improving clinical endpoints: Is personalised medicine the answer?

*A Genge (Canada)*

#### 11.00 – 11.30

**C111** ALS clinical heterogeneity: What we know and what we need to know

*S Vucic (Australia)*

#### 11.30 – 11.45

**C112** Evaluating the performance of the Bayesian primary efficacy analysis model in the HEALEY ALS Platform Trial

*B Saville (USA)*

#### 11.45 – 12.00

**C113** Head-to-head reliability of different outcome measures in the ALS Methodology Study 999AS003

*C Neuwirth (Switzerland)*

#### 12.00 – 12.15

**C114** Enhancing randomized clinical trials for ALS: harnessing synthetic placebo controls from patient registries

*R Van Eijk (Netherlands)*

#### 12.15 – 12.30

**C115** Can we beat the placebo response by patient stratification at the baseline of a clinical trial?

*B Lerner (Israel)*

## SESSION 10C

### SURROGATE MARKERS

Location: Montreal

Chairs: A Hübers (Switzerland)  
M de Carvalho (Portugal)

#### 10.30 – 10.50

**C116** Cerebrospinal fluid levels of Chitinase 3-like protein 1 correlate with cerebral glucose metabolism in ALS

*J De Vocht (Belgium)*

#### 10.50 – 11.10

**C117** Threshold tracking transcranial magnetic stimulation and neurofilament light chain as biomarkers in ALS

*A Jacobsen (Denmark)*

#### 11.10 – 11.30

**C118** Cortico-muscular coherence: A promising biomarker of neurodegeneration in ALS

*S Bista (Netherlands)*

#### 11.30 – 11.50

**C119** Cortical hyperexcitability in ALS is mediated by distinct neuronal populations

*N Pavey (Australia)*

#### 11.50 – 12.10

**C120** Dynamic analysis of brain state reveals altered functional networks in ALS: Insights from high density resting state EEG

*M Metzger (Ireland)*

#### 12.10 – 12.30

**C121** The cortical neurophysiological signature of ALS

*M Trubshaw (UK)*

## 12.30 – 14.00

### LUNCH

Location: Event Halle



# Friday 8 December

## SESSION 11

### JOINT CLOSING SESSION



Location: San Francisco

Chairs: A Al-Chalabi (UK)

D Taylor (Canada)

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#### 14.00 – 14.05

Invitation to Montreal 2024

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#### 14.05 – 14.10

Poster Prize Awards

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#### 14.10 – 14.20

Healey Center Prize

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#### 14.20 – 14.30

Lalji Family Award

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#### 14.30 – 15.00

C122 Genetic testing in ALS:  
Opportunities and challenges

M Harms (USA)

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#### 15.00 – 15.15

C123 Survival for patients with ALS:  
How close are we to developing a  
robust personalised prediction model?

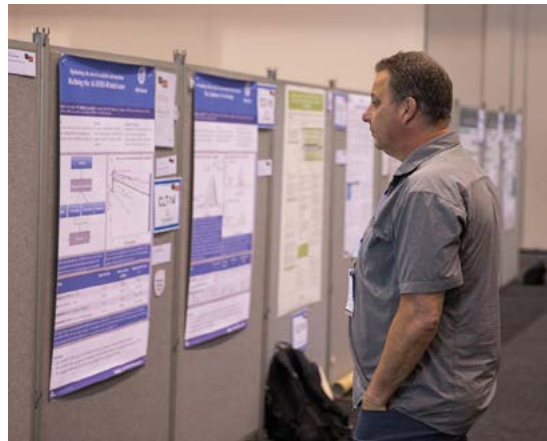
H-J Westeneng (Netherlands)

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#### 15.15 – 15.30

Late breaking news

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## Theme 01 - Epidemiology and Informatics

**EPI-01 MND Register for England Wales and Northern Ireland: interim analysis of incidence prevalence lifetime risk and case ascertainment**

Dr Sarah Opie-Martin

**EPI-02 Characterising the amyotrophic lateral sclerosis population in Europe – a clinical observational study of 21,000 patients as part of the PRECISION ALS project**

Dr Sarah Opie-Martin

**EPI-03 PRECISION ALS: A Bespoke Framework for Cross National Prospective Data Collection and Analysis**

Prof Orla Hardiman

**EPI-04 Exploring the interplay of BMI smoking and head injury with C9orf72 carrier status on ALS risk and functional decline**

Dr Charilaos Chourpiliadis

**EPI-05 Detection of environmental risk factors of ALS: Airborne Pure Lead and Lead Compounds**

Mr Kevin Cornell

**EPI-06 Sex Hormones and Neurodegenerative Disorders: a Mendelian Randomization Study**

Professor Chunyu Li

**EPI-07 Estimating the Size of the Asymptomatic Genetic ALS & FTD Community in the United States**

Ms Jean Swidler

**EPI-08 A nationwide epidemiological survey of Facial Onset Sensory and Motor Neuronopathy (FOSMN) in Japan**

Dr Senri Ko

**EPI-09 Health conditions preceding Motor Neurone Disease: a cross-country study from Australia, France and Sweden**

Dr Allan McRae

**EPI-10 Increase of ALS survival over an 18-year period: results from a population-based cohort**

Dr Rosario Vasta

**EPI-11 Age period and cohort (APC) effects on Amyotrophic Lateral Sclerosis (ALS) incidence in Ireland: a partial least squares regression (PLSR) model (1996-2021)**

Dr Robert McFarlane

**EPI-12 Natural history and remarkable psychiatric state of old-onset amyotrophic lateral sclerosis in China**

Mr Sen Huang

**EPI-13 Pathological insights and expert evaluation of primary lateral sclerosis: a case series**

Ms Eva de Boer

**EPI-14 Time-to-event prediction in ALS using a semi-competing risks modeling approach using the ALS Natural History Consortium dataset**

Mr Andres Arguedas

**EPI-15 Time-to-event prediction in ALS using a landmark modeling approach using the ALS Natural History Consortium dataset**

Mr. David Schneck

**EPI-16 Comparing States and Outcomes of Patients with Amyotrophic Lateral Sclerosis Using Tracheostomy Invasive Ventilation in Tokyo Japan and Ohio USA**

Ms Yuki Nakayama

**EPI-17 Health care utilization last month of life in ALS – a register study from Sweden**

Dr Anneli Ozanne

## Theme 02 - Genetics and Genomics

**GEN-01 MicroRNA and transfer-RNA derived small RNA signatures in ALS. ALS 'mimics' and healthy controls**

Ms Sharada Baidoor

**GEN-02 Mapping neuropathological signatures of rare ALS genes**

Dr Luca Biasetti

**GEN-03 Epigenetic sex differences in amyotrophic lateral sclerosis**

Dr Olivia Grant

**GEN-04 Expanding the genotype-phenotype diversity of ALS**

Dr Marta Gromicho

**GEN-05 Phenotype targeted exome in patients with Motor Neuron Disease**

Mr Raúl Domínguez-rubio

**GEN-06 Whole-genome bisulfite sequencing of motor neurons reveals cell specific enhancers and enables the identification of motor neuron derived cell-free DNA**

Dr Calum Harvey

**GEN-07 Targeting ALS by a novel conserved motor neuron micropeptide derived from lncRNA**

Ms Fang-Yu Hsu

**GEN-08 Characterization of transcriptional diversity in C9orf72-related diseases using a novel long-read sequencing technology**

Ms Angita Jain

**GEN-09 Transcriptome-based in silico screening in human motor neurons with ALS-associated mutations in TARDBP/TDP-43**

Ms Sarah Lépine

**GEN-10 Mutations in the tail domain of the neurofilament heavy chain gene increase the risk of amyotrophic lateral sclerosis**

Ms Heather Marriott

**GEN-11 Targeted long-read sequencing of C9orf72 in multiple human tissues**

Mr Evan Udine

**GEN-12 Intronic KIF5A TC variant modifies rate of progression and survival in sporadic amyotrophic lateral sclerosis**

Dr Frances Theunissen

**GEN-13 Genotype-phenotype correlation of SQSTM1 variants in patients with amyotrophic lateral sclerosis**

Dr Shichan Wang

**GEN-14 What is the best strategy to perform a genetic study in patients with ALS?**

Dr Daniel Borrego Hernández

**GEN-15 Body mass index is lower in presymptomatic C9orf72 pathogenic variant carriers compared to presymptomatic SOD1 pathogenic variant carriers and gene-negative controls**

Dr Ikjae Lee

**GEN-16 Evaluating Deep Learning Methods for ALS Patient Prediction: Performance Analysis across Multiple Cohorts**

Miss Jiajing Hu

**GEN-17 A case of familial ALS with a novel mutation in the ANXA11 gene**

Professor Seiichi Nagano

**GEN-18 Genetic analysis and prognostic biomarkers of ALS in Taiwan**

Dr Kang-yang Jih

**GEN-19 POSTER WITHDRAWN**

**GEN-20 Analysis of genetic characteristics of a cohort of Italian patients of a referral center of Amyotrophic Lateral Sclerosis**

Dr Laura Libonati

**GEN-21 Evaluating the Neurological Proteome as an ALS Biomarker in an Australian Multi-omic Cohort**

Miss Laura Ziser

**GEN-22 Genetic factors affecting survival in Japanese patients with sporadic amyotrophic lateral sclerosis: a genome-wide association study and verification in iPSC-derived motor neurons from patients**

Dr Ryoichi Nakamura

**GEN-23 Genetic spectrum of ALS in a South African cohort**

Dr Melissa Nel

**GEN-24 C9orf72 gene repeat expansion profile of motor neurone disease patients in Portugal**

Dr Cláudia Santos Silva

**GEN-25 POSTER WITHDRAWN**

**GEN-26 My ALS Decision Tool™: An interactive online informed decision-making tool for genetic testing in ALS**

Ms Lauren Webb

**GEN-27 Combinatorial Analysis of ALS and FTD Patient Genomes to Identify Cross-Disease Mechanisms**

Dr Andrzej Malinowski

**GEN-28 Alzheimer's Disease and Frontotemporal Dementia: A bi-directional mendelian randomization study**

Dr Xiaoting Zheng

**GEN-29 Association of TRMT2B Gene Variants with Juvenile Amyotrophic Lateral Sclerosis**

Professor Junling Wang

**GEN-30 Young-onset and rapidly progressive amyotrophic lateral sclerosis caused by a novel frameshift truncating mutation p.Y153Qfs\*9 in TBK1 gene**

Professor Yi-Chung Lee

**GEN-31 Genetic analysis in patients with Young onset ALS of Chinese origin**

Professor Zhangyu Zou

**GEN-32 How frequent is early 'dropped head syndrome' associated with FUS/TLS mutations?**

Dr Josep Gamez

## Theme 03 - In Vitro Experimental Models

**IVT-01 Investigating the effects of the immune system on the progression of ALS**

Dr Nasser Al-Shanti

**IVT-02 Role of C9orf72/SMCR8/WDR41 complex in inflammation**

Miss Maleeha Khan

**IVT-03 Source mapping of ALS-miRNA biomarkers using human astrocyte models**

Miss Hannah Bailey

**IVT-04 POSTER WITHDRAWN**

**IVT-05 Cellular stress induces neuron-specific degradation of the fragile x protein family**

Ms Lorena Decker

**IVT-06 Loss of individual fragile X protein family members is related to defects in proteostasis**

Ms Sonja Menge

**IVT-07 Using TDP-43 stem cell models to investigate calcium channel blockers for repurposing in ALS**

Dr Emily Carroll

**IVT-08 Utilising human iPSC-derived neuronal models to investigate novel modulators of TDP-43 pathology**

Ms Matisse Jacobs

**IVT-09 Understanding the impact of TDP43 on neuromuscular junction denervation by using a human stem cell derived neuromuscular assembloid model**

Miss Andrea Salzinger

**IVT-10 Small heat shock proteins enhance TDP-43 condensate dynamics and mitigate pathological modification**

Mr Thomas Walker

**IVT-11 Translation of dipeptide repeat proteins from antisense transcripts in C9ORF72 ALS/FTD through unique and redundant AUG initiation codons**

Dr Yoshifumi Sonobe

**IVT-12 A stem cell-derived microfluidic 3D triculture model to study astrocyte microglia and motor neuron interactions in C9orf72 ALS**

Dr Marianne King

**IVT-13 The effects of ALS-associated SQSTM1/p62 mutations on autophagy inflammation and oxidative stress**

Mr Yuval Gurfinkel

**IVT-14 Biochemical regulation of Sequestosome-1/p62 foci is impaired by ALS/FTD-linked cyclin F**

Dr Jennilee Davidson

**IVT-15 Electrophysiological abnormalities in early stages of motor neuron pathology in G93A SOD1 mice**

Dr Martina Wiedau

**IVT-16 Nrf2 pre-activation protects against arsenite-induced oxidative stress**

Dr Flavia Rosianu

**IVT-17 Sigma 1 receptor an ALS16-causative gene product prevents mitochondrial fragmentation via ATAD3A in ALS**

Dr Seiji Watanabe

**IVT-18 Pridopidine exerts neuroprotective effects via activation of the Sigma-1 receptor (S1R)**

Dr. Michal Geva

**IVT-19 Calretinin activates microglia to produce CC-motif ligand 2 relevant to clinical severity of ALS**

Dr Shintaro Hayashi

**IVT-20 The Molecular Mechanism Underlying How Extracellular Phosphoglycerate Kinase 1 Improves the Neurite Outgrowth of Motor Neurons**

Professor Huai-Jen Tsai

**IVT-21 Alteration of Adipocyte Function in Amyotrophic Lateral Sclerosis: Development of the Humanized In Vitro Model System to Screen for Immuno-Metabolic Molecular Signatures**

Mr Alexandre Vezina

## Theme 04 - In Vivo Experimental Models

**IVV-01 AIT-101 Improves Functional Deficits in a Human TDP-43 Animal Model of ALS**

Dr Peter R Young

**IVV-02 Cytoplasmic interactions of TDP with core paraspeckle proteins are enriched in ALS vulnerable brain regions in the mouse**

Dr Jackie Mitchell

**IVV-03 Cell stress and apoptotic activation even prior to disease onset in a TDP-43 mouse model of ALS/FTD**

Dr Wei Luan

**IVV-04 Imaging the spinal cord neurodegeneration of the TDP-43-A315T ALS mouse model: relationship between MRI and TDP-43 aggregates**

Ms Yara Al Ojaimi

**IVV-05 TAR DNA binding protein- 43 KDa (TDP-43) pathology causes differential expression of retrotransposons in a TDP-43- Q331K mouse model**

Miss Shreevidya Korada

**IVV-06 Modulation of mutant TDP-43 within astrocytes ameliorates disease progression in a mouse model of amyotrophic lateral sclerosis**

Ms Anna Barbieri

**IVV-07 A new ALS/FTD mouse model with widespread expression of C9orf72 nucleotide repeats throughout the CNS**

Ms Katelyn Russell

**IVV-08 Investigating the molecular basis for selective vulnerability in FET-linked Amyotrophic Lateral Sclerosis (ALS) and Frontotemporal dementia (FTD)**

Miss Laura Odemwingie

**IVV-09 Early bioenergetic hypothalamic dysfunction in SOD1G93A mice**

Dr Valentina Nesci

**IVV-10 Antibiotic mediated modulation of gut microbiome affects survival in SOD1 mice**

Dr Megha Kaul

**IVV-11 Pan-neuronal expression of human SOD1 mutations in Drosophila induces early neuroinflammation**

Dr Francesco Liguori

**IVV-12 Drosha-dependent microRNAs modulate FUS-mediated amyotrophic lateral sclerosis in vivo**

Dr Udai Pandey

**IVV-13 Characterising novel humanised and physiological mouse models of FUS-ALS**

Ms Georgia Price

**IVV-14 A novel modulator of modified proteins reduced pathogenetic stress in in vivo ALS models**

Dr Olfat Abduljabbar

**IVV-15 Do Glial Cells contribute to the Differential Vulnerability of Neuromuscular Junctions in Amyotrophic Lateral Sclerosis?**

Mrs Marine BORD

**IVV-16 Divergent Pathologies in Novel Knockin Mutant Matrin 3 Mouse Models**

Dr David Medina

**IVV-17 Investigating the regeneration competence of peripheral motor neurons in ALS**

Dr Samuele Negro

**IVV-18 Nuclear import defects in a nemf mutant mouse model of neurodegeneration**

Mr Jonathan Plessis-belair

**IVV-19 DNAJC7 interaction prevents tau fibril formation in vitro and loss of interaction with tau occurs after phosphorylation of threonine 175 and PAD exposure of tau in a rat model of traumatic brain injury**

Professor Michael Strong

**IVV-20 Phenotyping of the rNLS8 mouse model of amyotrophic lateral sclerosis**

Mr Jussi Toivanen

**Theme 05 - Human cell biology and pathology (including iPSC studies)**

**HCB-01 A transcriptome-wide RNA binding analysis of C9orf72 poly(PR) dipeptides**

Dr Rubika Balendra

**HCB-02 Nuclear transport receptors as novel modifiers of C9orf72 pathology**

Dr Feilin Liu

**HCB-03 Loss of C9orf72 dysregulates several aspects of nucleocytoplasmic transport contributing to TDP-43 mislocalization in ALS**

Dr Philip Mcgoldrick

**HCB-04 Investigating purine metabolism in C9orf72 ALS**

Dr Benjamin Hall

**HCB-05 MitoALS: The role of mitochondrial dysfunction in ALS**

Dr Tale L Bjerkes

**HCB-06 Mutations in TDP-43 reduce mitochondrial bioenergetics and axonal transport in ALS iPSC-derived motor neurons**

Dr Ruxandra Dafinca

**HCB-07 Metabolomics to probe the mechanistic link between brain iron deposition and lipid changes in neurodegenerative diseases using human post-mortem tissue**

Dr Holly Spence

**HCB-08 Acute Oxidative Stress Exacerbates ALS-Related Pathology and Impairs Translation of UNC13A and PURA in C9orf72-ALS Motor Neurons**

Dr Yinyan Xu

**HCB-09 Markers of TDP-43 loss-of-function in MND**

Dr Maize Cao

**HCB-10 TDP-43 regulation by microRNAs toward the treatment of ALS**

Dr Keiko Imamura

**HCB-11 A fluid biomarker reveals loss of TDP-43 splicing repression in presymptomatic ALS**

Ms Katherine Irwin

**HCB-12 TDP-43 Dysfunction triggers exon skipping and aggregation of the epilepsy gene KCNQ2 in ALS/FTD**

Dr Evangelos Kiskinis

**HCB-13 Exploring the Role of Viral Infection in TDP-43-Mediated ALS Pathogenesis**

Mr Vithushan Surendran

**HCB-14 Hippocampal pTDP-43 aggregation as an independent pathology in genetic amyotrophic lateral sclerosis: Exploring the 'two-hit' hypothesis at super resolution**

Miss Kyrath Thumbadoo

**HCB-15 Reactive transformation of VCP mutant microglia in ALS activates JAK-STAT in motor neurons**

Dr Ben Clarke

**HCB-16 An alternatively spliced SFPQ mRNA generates a novel cytoplasmic SFPQ protein and is upregulated in VCP-ALS**

Dr Jacob Neeves

**HCB-17 Can the abnormal stimulation of the multisystem inflammatory component by environmental factors be causative of the onset of ALS?**

Dr Claudia Crosio

**HCB-18 miRNAs profiling in peripheral blood mononuclear cells of fast and slow progressors Amyotrophic Lateral Sclerosis patients**

Stella Gagliardi

**HCB-19 C9orf72-ALS iPSC microglia are pro-inflammatory and toxic to motor neurons via MMP9**

Dr Björn Vahsen

**HCB-20 On the intersection of nucleocapsid protein (NCP) of the SARS-CoV-2 virus and the pathobiology of ALS**

Professor Michael Strong

**HCB-21 Development of in vitro ALS discovery and translational assays with patient-derived cells**

Dr Mathilde Chaîneau

**HCB-22 ALS fibroblast derived exosomes increase wound healing**

Mr Vincent Clément

**HCB-23 Investigating the contribution of neuromuscular signaling in ALS/MND pathology**

Dr Peter Noakes

**HCB-24 Modeling ALS using human iPSCs-derived astrocytes**

Dr Vincent Soubannier

**HCB-25 Generation of spinal cord organoids using the bioreactor for ALS medicine**

Dr Dang Suong

**HCB-26 Analyzing the relation between neurofilament subunit abnormalities and neuromuscular junction disruption using an iPSC-derived model of ALS**

Miss Maria Jose Castellanos-Montiel

**HCB-27 Glial involvement in the mechanism of synapse loss in the ALS CNS**

Dr Zsafia Laszlo

**HCB-28 C21ORF2 mutations point toward primary cilia dysfunction in ALS**

Miss Matilde Contard

**HCB-29 SOD1 activity and protein level in CNS and peripheral tissues**

Ms Laura Leykam

**HCB-30 Neurofilament content of patient sensory skin axons reflects ALS progression**

Miss Julia Meyer

**HCB-31 Characterizing the protective role of redox-regulated Nucleoredoxin (NRX) in Motor Neuron Disease (MND)**

Dr Sonam Parakh

**HCB-32 C4G2 repeat RNA binds to FARS protein and affect the rate of phenylalanine-tRNA aminoacylation**

Professor Boris Rogelj

**HCB-33 Nucleoporin Coding Variants: Disease Initiation for Sporadic ALS**

Dr Jeffrey Rothstein

**HCB-34 Characterization of stress granule formation in cells overexpressing a novel extracellular isoform of Fused in Sarcoma (EC-FUS)**

Dr Sayanthoran Saravanabavan

**HCB-35 The G3BP-centric interaction network regulates the dynamics of stress granules**

Mr Jinjun Wu



## Theme 06 - Tissue Biomarkers

**BIO-01 Multicenter evaluation of neurofilaments light chain in adult spinal muscular atrophy patients treated with nusinersen**

Mrs Annika Wachinger

**BIO-02 Neurofilament light chain level in plasma of ALS patients following IPL344 treatment in phase 1/2a clinical trial (NCT03652805 NCT03755167)**

Dr. Ilana Cohen

**BIO-03 Inflammatory and neurodegenerative biomarkers in SOD1-related ALS after treatment with Tofersen**

Dr Elisabetta Zucchi

**BIO-04 Neurodegenerative biomarkers outperform neuroinflammatory biomarkers in amyotrophic lateral sclerosis**

Dr Ulf Kläppe

**BIO-05 Exploration of changes of neuroinflammatory biomarkers in ALS CSF and plasma in clinical immunoassays set up**

Dr Magda Koziczak

**BIO-06 The correlation of immune and metabolic markers with clinical features and disease development in ALS patients**

Miss Huihui Zhao

**BIO-07 Longitudinal analysis of T cell responses in amyotrophic lateral sclerosis**

Miss Solmaz Yazdani

**BIO-08 Biofluid extracellular vesicle extraction and profiling in ALS**

Dr Elizabeth Dellar

**BIO-09 The development of robust and reproducible methods for quantifying miRNA from neural-enriched extracellular vesicles for an ALS-diagnostic application**

Dr Rachael Dunlop

**BIO-10 Cross-tissue miRNA analysis of extracellular vesicles and peripheral blood mononuclear cells from ALS patients**

Dr Stella Gagliardi

**BIO-11 Novel insights on the role and therapeutic potential of Glycoprotein nonmetastatic melanoma protein B (Gpnmb) in Amyotrophic Lateral Sclerosis**

Dr Mauro Giuseppe Spatafora

**BIO-12 Brown Adipose Tissue: a novel actor in the pathogenesis of Amyotrophic Lateral Sclerosis**

Dr Marco Rosina

**BIO-13 Glial fibrillary acidic protein and vascular endothelial growth factor in adult SMA patients treated with nusinersen**

Dr Miguel Oliveira Santos

**BIO-14 Development of a Composite Diagnostic Biomarker for Amyotrophic Lateral Sclerosis: Experimental Approach and progress to date**

Jamie Timmons

**BIO-15 Increased ADAM 10/17 activity in an animal model of ALS: rationale for targeting ADAMs as a potential therapeutic target?**

Dr Paolo Cabras

**BIO-16 Skeletal muscle protein signatures to predict fast versus slow disease progression in ALS transgenic mice**

Dr Caterina Bendotti

**BIO-17 Co-chaperones in post-mortem neural tissue from ALS patients**

Miss Laura Expósito-Blázquez

**BIO-18 Cell-free DNA as a non-invasive biomarker to detect ALS**

Dr Fleur Garton

**BIO-19 Cystatin C is associated with poor survival in amyotrophic lateral sclerosis patients**

Dr Qirui Jiang

**BIO-20 Blood Cells: Unravelling their impact on Respiratory Outcome and Survival in ALS**

Dr Ana Catarina Pronto-Laborinho

## Theme 07 - Pre-clinical Therapeutic Strategies

**TST-01 Development of a novel SOD1 antisense therapy for SOD1-linked and sporadic ALS**

Dr Loren Flynn

**TST-02 MisfoldUbl: Targeting misfolded protein as a therapeutic strategy for SOD1 familial ALS**

Mrs Christen Chisholm

**TST-03 A polytherapy approach demonstrates therapeutic efficacy in familial SOD1 ALS models**

Dr Jeremy Lum

**TST-04 C1q inhibition reduces neurodegenerative damage preserves neuromuscular junctions and improves compound muscle action potential in the SOD1G93A mouse model**

Dr Alessia Tassoni

**TST-05 ALS gene therapy by RNA interference using a bi-specific AAV9 vector targets mutated SOD1 in neurons and astrocytes across the mouse and primate spinal cord**

Dr Pamela Valdés

**TST-06 The impact of intense endurance exercise on SOD1G93A mouse model**

Dr Silvia Scaricamazza

**TST-07 Oral treatment with D-RD2RD2 impedes early disease mechanisms in SOD1\*G93A transgenic mice but does not prolong survival**

Ms Katharina Wintz

**TST-08 NX210c drug candidate peptide improves motor function and prolongs survival in the SOD1G93A mouse model of ALS**

Dr Sighild Lemarchant

**TST-09 Chlorovirus glycoproteins and SOD1G93A significantly enhance while cellular proteins IRF3 and ERK MAP-kinase significantly dampen production of ALS-associated inflammatory factors from murine macrophages**

Dr Gary Pattee

**TST-10 Allele selective FUS targeted antisense oligonucleotide therapeutic development for ALS**

Dr Rita Mejzini

**TST-11 Longitudinal study of the neuronal effects of ALS-linked mutant FUS in mice and the therapeutic effects of NF- $\kappa$ B inhibition**

Mrs Mari Carmen Pelaez

**TST-12 Update on AMX0114: An Antisense Oligonucleotide Targeting Calpain-2 a Critical Effector of Axonal Degeneration**

Joshua Cohen

**TST-13 Effects of HDAC6 Inhibition in ALS mouse models**

Ms Fariha Kabir

**TST-14 Urolithin A Delay the Progression of Amyotrophic Lateral Sclerosis by Promoting PINK1/Parkin-Dependent Mitophagy in Motor Neuron**

Mr Sen Huang

**TST-15 M102**

**A multi-target drug suitable for personalised medicine approaches in ALS**

Dr Raquel Rua Martins

**TST-16 Therapeutic efficacy of targeting iron metabolism and iron-mediated lipid peroxidation in neurodegenerative disease: a systematic review and meta-analysis**

Dr Holly Spence

**TST-17 CXCR4: a marker of neurotransmission failure and a target for neuromuscular function recovery in ALS**

Dr Giorgia D'Este

**TST-18 Pharmacological enhancement of skeletal muscle regeneration in Amyotrophic Lateral Sclerosis through intramuscular allosteric activation of the P2X7 receptor**

Mrs Paola Fabbrizio

**TST-19 Targeting microglia to slow or stop ALS**

Professor Fei Song

**TST-20 Glial cells at the neuromuscular junction as therapeutic target in ALS**

Miss Elsa Tremblay

**TST-21 Interferon signalling as a potential therapeutic target in amyotrophic lateral sclerosis and frontotemporal dementia – a systematic review and meta-analysis**

Dr Fergal Waldron

**TST-22 ALS and the gut-brain axis: A systematic review and meta-analysis assessing the relationship between amyotrophic lateral sclerosis the gut and its microbiome**

Dr Fergal Waldron

**TST-23 The two-pore potassium channel KCNK13 as a target to modulate neuroinflammation in Amyotrophic Lateral Sclerosis**

Dr Bernardino Ossola

**TST-24 Familial forms of ALS differ in their stress responses and neuroprotection conferred by histone deacetylase inhibitors and arimocloamol**

Professor Heather Durham

**TST-25 Characterization of a therapeutic approach to target TDP-43 proteinopathy using phage display-derived scfv complexed to SPION**

Miss Yara AL OJAIMI

**TST-26 Antisense oligonucleotide mediated reduction of C9ORF72 expansion containing transcripts in iPSC-derived motor neurons**

Mr Leon Larcher

**TST-27 Identification of human genetic modifiers of TDP-43-mediated toxicity and aggregation**

Ms Matisse Jacobs

**TST-28 Cytoplasmic TDP-43 accumulation in the mouse cortex drives a transient neuronal non-canonical protein folding response**

Sean Keating

**TST-29 TDP-43 pathology and autophagy defects modeled and rescued in TBK1 mutant iPSC derived motor neurons**

Dr Zoe Simmons

**TST-30 Edaravone ameliorates the neurodegeneration in ALS patient-derived neurons by restoring TDP-43 mislocalization**

Dr Makoto Tamura

**TST-31 The effect of antiretroviral therapy Triumeq on a TDP-43 mouse model of ALS**

Ms Megan Dubowsky

**TST-32 Therapeutic administration of the borna virus x protein by a viral vector aav10 in a mouse model of ALS**

Mrs Jeflie Tournezy

**TST-33 Prior acute viral infection accelerates the progression of ALS**

Mr Art Marzok

**Theme 08 - Clinical Imaging and Electrophysiology**

**IMG-01 Fasciculation electromechanical latency is prolonged in ALS**

Dr James Bashford

**IMG-02 Fasciculations occur deep in the muscle and often go unnoticed in ALS**

Dr Kota Bokuda

**IMG-03 Fasciculations in SOD-1 Amyotrophic Lateral Sclerosis patients receiving tofersen: insights from high density surface electromyography**

Dr James Scott

**IMG-04 EEG Event-Related Potentials in a Response-Inhibition Task Reflect Impairments Specific to ALS: A Comparative Study against Multiple Sclerosis**

Ms Rosie Giglia

**IMG-05 Resting-state EEG alterations in asymptomatic C9orf72 repeat expansion carriers**

Mr Stefan Dukic

**IMG-06 Motor unit number estimation in the split hand of amyotrophic lateral sclerosis**

Dr Nathan Pavey

**IMG-07 MUNIX describes the individual disease course in ALS and precede the global motor function loss in half the time – experiences from analyzing MUNIX in the context of the D50 disease progression model in ALS**

Dr Annkathrin Roediger

**IMG-08 Upper motor neuron assessment in amyotrophic lateral sclerosis using the patellar tendon reflex and motor-evoked potentials to the lower limbs (T-MEP-LL) : a sensitive tool for diagnosis**

Mrs Nathalie Guy

**IMG-09 Neuronal Hypoexcitability is Prominent in In Vitro Human Striatal Neurons Derived From FTD/ALS Patients Harboring the C9ORF72 Repeat Expansion Mutation**

Mr Manpreet Atwal

**IMG-10 Arterial spin labeling reveals hypoperfusion in presymptomatic and symptomatic C9orf72 repeat expansion carriers**

Dr. Corey McMillan

**IMG-11 Preliminary evidence of in vivo abnormalities in the peripheral nerve excitability of C9orf72 families**

Mr Diederik Stikvoort Garcia

**IMG-12 Cortical excitability perturbation during voluntary movement in ALS**

Miss Cristina Benetton

**IMG-13 Relationship between cortical hyperexcitability and astrogliosis in amyotrophic lateral sclerosis**

Dr Mana Higashihara

**IMG-14 Cortical sensorimotor integration in patients with ALS**

Professor Veronique Marchand-Pauvert

**IMG-15 Impaired TMS-measured interhemispheric inhibition in ALS may not reflect corpus callosum malfunction**

Dr Roisin McMackin

**IMG-16 Longitudinal progression of subcortical structural damage in amyotrophic lateral sclerosis**

Dr Edoardo Gioele Spinelli

**IMG-17 Central Neurodegeneration Accompanies Peripheral Nerve Dysfunction in Spinobulbar Muscular Atrophy: Dissociable Clinical Profile to ALS**

Dr Sicong Tu

**IMG-18 Motor system connectivity in ALS: A corticomuscular magnetoencephalography study**

Dr Katie Yoganathan

**IMG-19 Associations between cognitive performance glucose metabolism and grey matter volume in ALS**

Ms Annaliis Lehto

**IMG-20 Brain “neurovascular coupling in amyotrophic lateral sclerosis: correlations with cognitive impairment and disease progression**

Dr Minoo Sharbafshaaer

**IMG-21 Do audio-visual distractions affect TMS-based measures?**

Ms Yasmine Tadjine

**IMG-22 Prevalence of Oropharyngeal Dysphagia and its perception in ALS patients**

Miss Stephanie Anna Riera

**IMG-23 Dynamic suprahyoid muscle ultrasound in assessing oropharyngeal dysphagia in amyotrophic lateral sclerosis**

Dr Joo Hye Sung

**IMG-24 Volumetric Analysis of the Brainstem: Predictability of Respiratory and Bulbar Function in Amyotrophic Lateral Sclerosis**

Dr Mohammed Khamaysa

**IMG-25 Utility of vagus and phrenic nerve ultrasound in patients with motor neuron disease as a potential predictor of disease progression**

Dr Mansoureh Mamarabadi



**IMG-26 Electromechanical coupling study in Amyotrophic Lateral Sclerosis patients as a marker of different progression**

Dr Laura Libonati

**IMG-27 Motor band sign is a specific marker of ALS and corresponds topographically to motor symptoms**

Ms Charlotte Zejlon

**IMG-28 Validation and histopathological correlation of the rAMIRA-based Spinal Cord Lateral Tract Sign in Amyotrophic Lateral Sclerosis**

Dr Maria Janina Wendebourg

## Theme 09 - Clinical Trials and Trial Design

**CLT-01 CARDINALS: a phase 2 randomized double-blind placebo-controlled parallel-group study to evaluate the efficacy and safety of utreloxastat (PTC857) in patients with ALS**

Ms Mayzie Johnston

**CLT-02 Evaluating the Safety Tolerability and Pharmacokinetics of QRL-101 in a Single Ascending Dose Study in Healthy Adults and a Multiple Ascending Dose Study with Exploratory Electrophysiological Markers in adults living with ALS**

Dr. Angela Genge

**CLT-03 RIPK1 inhibitor SAR443820 in adult participants with amyotrophic lateral sclerosis (ALS): Study design and participant baseline characteristics of the Himalaya trial**

Dr Li Xiong

**CLT-04 Vitamin E ( $\alpha$ -tocopherol) Adjuvant Treatment for Riluzole and Riluzole / Edaravone – What are the clinical outcomes to be measured?**

Professor Benjamin Rix Brooks

**CLT-05 The integrated stress response is modulated by eIF2B agonist DNL343: results from phase 1 healthy subject and phase 1b ALS patient studies**

Dr Linus Sun

**CLT-06 Combination of Anti-aging therapies and Cell therapy for treatment of ALS**

Dr Hemangi Sane

**CLT-07 A Propensity-Score-Matched Control Surveillance Study of Intrathecal Autologous Bone Marrow-Derived Mesenchymal Stem Cells (Neuronata-R<sup>®</sup>) Treatment in Patients with ALS to Assess the Long-Term Survival Benefits**

Dr Seung Hyun Kim

**CLT-08 Baseline and Safety Data from a Phase 2 Clinical Trial of Repeated Intrathecal Autologous Adipose-Derived MSCs in ALS**

Dr Nathan Staff

**CLT-09 NurOwn Autologous Stem Cell Transplant- a Precision Medicine Approach Using Mesenchymal Stem Cell Neurotrophic Factors for ALS**

Professor Merit Cudkowicz

**CLT-10 Ongoing and Planned Studies to Further Elucidate the Efficacy Safety and Pharmacokinetics of Sodium Phenylbutyrate and Taurursodiol in Amyotrophic Lateral Sclerosis**

Jorgi Kerthi

**CLT-11 Preliminary Experience With Sodium Phenylbutyrate and Taurursodiol in a United States Expanded Access Program**

Machelle Manuel

**CLT-12 Clinical and neurofilament light-chain response to tofersen in SOD1-ALS: Results of a multicenter observational study**

Professor Thomas Meyer

**CLT-13 Implementation of Tofersen Expanded Access Program in the US The Cumulative Experience of Six Academic Centers**

Dr Senda Ajroud-Driss

**CLT-14 Phase 1 Trial of Autologous Hybrid TREG/Th2 Cells (RAPA-501) in Patients Living With ALS: In Vivo Modulation of Immune Regulatory Molecules**

Professor James Berry

**CLT-15 Longitudinal comparison of the self-entry and traditional ALSFRS-R as functional outcome measures in ALS**

Professor James Berry

**CLT-16 MIROCALS: Understanding the transcriptional response in the blood to low-dose IL-2 treatment in ALS**

Prof Janine Kirby

**CLT-17 Genetic status in clinical trials: The Modifying Immune Responses and Outcomes in ALS Study (MIROCALS)**

Professor Ammar Al-Chalabi

**CLT-18 Interim Analysis of the Radicava/Edaravone Findings in Biomarkers from ALS (REFINE-ALS) Study**

Dr Steve Apple

**CLT-19 Shifting the Paradigm - A Biomarker Driven Approach for Studying Amyotrophic Lateral Sclerosis (ALS) Therapy Activity**

Dr. Shiran Zimri

**CLT-20 Hospitalizations in COURAGE-ALS and Their Relationship to ALS**

Dr Stacy Rudnicki

**CLT-21 Effects of a two-year period Hybrid Assistive Limb use on gait in patients with spinal and bulbar muscular atrophy**

Dr Takehisa Hirayama

**CLT-22 Portable fixed dynamometry enables home-based reliable assessment of muscle strength in patients with amyotrophic lateral sclerosis: a pilot study**

Mr Jordi van Unnik

**CLT-23 Internet-Supervised Home-Based Slow Vital Capacity (SVC) Spirometry through Telemedicine in Amyotrophic Lateral Sclerosis – Prospective Multi-Center Observational Study**

Dr Eufrosina Young

**CLT-24 Utilising qualitative methods for collecting data with people with MND: Benefits challenges and best practice**

Dr Alys Griffiths

## CLT-25 POSTER WITHDRAWN

**CLT-26 A Meta-analysis of inclusion/exclusion criteria in interventional Amyotrophic Lateral Sclerosis (ALS) clinical trials and its impact on recruitment**

Miss Ashley Stepler

**CLT-27 EXPERTS-ALS: A drug prioritisation platform**

Professor Martin Turner

**CLT-28 Leading subdomains of the ALSFRS-R in the D50 progression model**

Professor Julian Grosskreutz

**CLT-29 Analyzing ALS progression: Unveiling rates patterns and variability in the ALSFRS-R using retrospective data from the PRECISION ALS Consortium**

Ms Daphne Weemering

**CLT-30 A joint model for assessing Mortality-Adjusted Progression (MAP) in Amyotrophic Lateral Sclerosis: Application to clinical trials of Sodium Phenylbutyrate and Taurursodiol**

Ruben van Eijk

**CLT-31 Co-producing a digital service to facilitate large-scale remote research participation: Telehealth in MND Research (TiM-R)**

Dr Liam Knox

**CLT-32 Applying the Systematic Living Evidence for Clinical Trials (SyLECT) framework in MND-SMART: Selection of amantadine as the 3rd experimental arm**

Dr Charis Wong

**CLT-33 Automating the Update of ALS Signal. A Clinical Trials Dashboard Ensuring that PLWALS and cALS have accurate and up-to-date global ALS clinical trials information**

Mr Robert Faulstich

**CLT-34 How to lockdown-proof a trial: lessons from the adaptation of the MiNDToolkit intervention from in-person to remote delivery during the COVID-19 pandemic**

Dr Emma Flanagan

## Theme 10 - Disease Stratification and Phenotyping of Patient

**DSP-01 Evaluation of arterial blood gas parameters as prognostic markers in amyotrophic lateral sclerosis**

Dr H el ene Blasco

**DSP-02 Protein signatures in CSF reflecting cognitive decline in ALS**

Dr Sofia Bergstr om

**DSP-03 Serum NfL or GFAP to distinguish sporadic frontotemporal dementia from late-onset psychiatric disorders: a DIPPA-FTD study**

Ms Sterre de Boer

**DSP-04 Virome Inflammation and Metabolism Signatures for the stratification of Amyotrophic Lateral Sclerosis Patients**

Dott Laura Ferri

**DSP-05 RNA sequencing of amyotrophic lateral sclerosis peripheral blood reveals distinct molecular subtypes: considerations for biomarker discovery**

Ms Natalie Grima

**DSP-06 Detection and Discovery of Urinary Biomarkers of Immune Dysfunction for ALS**

Mr Vassilios Karnaros

**DSP-07 NfM in CSF as a prognostic marker in relation to NfL and pNfH in ALS**

Ms Jennie Olofsson

**DSP-08 Plasma neurofilament analysis in VITALITY-ALS: analysis at baseline longitudinal and by rate of disease progression**

Dr Tyrell Simkins

**DSP-09 Implication of Central Nervous System Barrier Impairment in Amyotrophic Lateral Sclerosis: Gender-Related Difference in Patients**

Dr Hugo Alarcan

**DSP-10 Assessing Disease Progression and Survival Patterns in ALS: A Study of Prognostic Subgroups and Deviations from Expected Outcomes**

Dr In es Alves

**DSP-11 Altered metabolic rates are not limited to patients with amyotrophic lateral sclerosis but are also present in patients with progressive muscle atrophy and primary lateral sclerosis**

Mr Mark Janse van Mantgem

**DSP-12 Familial motor neuron disease: co-occurrence of PLS and ALS (-FTD)**

Mr Koen Demaegd

**DSP-13 Impact of age on the bulbar phenotype of ALS patients**

Professor Susana Pinto

**DSP-14 Amygdala TDP-43 pathology is associated with behavioural dysfunction in amyotrophic lateral sclerosis**

Ms Olivia Rifai

**DSP-15 C9orf72-related disease among cognitive and movement disorders patients**

Ms Yulia Shpilyukova

**DSP-16 Comparison of ALS patients with and without clinical evidence of upper motor neuron dysfunction**

Ms Jungmin So

**DSP-17 A Clinical Scale for Rating the Severity of Bulbar Lower Motor Neuron Dysfunction in Amyotrophic Lateral Sclerosis**

Miss Alessia Giugno

**DSP-18 Clinical-based prediction models for gastrostomy timing in patients with Amyotrophic Lateral Sclerosis**

Dr Andrea Lizio

**DSP-19 Clinical Validation of a Novel Device for Objective Measurement of Hand Dexterity**

Dr Conor Hayden

**DSP-20 Passive wrist-worn accelerometer-derived endpoints decline alongside disease progression in patients with motor neuron disease**

Mr Sylvain Zorman

**DSP-21 Advancing Patient-Centric Therapies: A Novel Framework for Developing Sensor-Based Digital Health Technologies as Clinical Outcome Assessments in Amyotrophic Lateral Sclerosis**

Mr Sylvain Zorman

**DSP-22 Could home physiology monitoring in Amyotrophic Lateral Sclerosis be a useful non-invasive biomarker?**

Dr James Scott

**DSP-23 The eye-tracking metrics in ALS: a way to describe oculomotor dysfunction and its association with clinical impairment**

Dr Federica Cozza

**DSP-24 Data Fusion with a Multi-Channel Variational Autoencoder Improves Motor Neuron Disease Prognosis Prediction**

Miss Florence Townend

**DSP-25 A Preliminary Analysis of Oral Edaravone-Treated Patients With Amyotrophic Lateral Sclerosis Enrolled in a US-Based Administrative Claims Database**

Ms Malgorzata Ciepielewska

**DSP-26 PRECISION-ALS: Examining the impact of Amyotrophic Lateral Sclerosis (ALS) on working status and caregiver assistance using population-based European databases**

Dr Robert McFarlane

## Theme 11 - Cognitive and Psychological Assessment and Support

**COG-01 Evaluation of support groups for caregivers of people living with ALS/ MND**

Ms Malin Bj orkquist

**COG-02 Reflections of family caregivers and health professionals on the everyday challenges of caring for persons with amyotrophic lateral sclerosis and cognitive impairments: a qualitative study**

Dr Lene Klem Olesen

**COG-03 Is the MiNDToolkit a feasible online intervention for carers of people with MND presenting with behavioural symptoms?**

Professor Eneida Mioshi

**COG-04 Being a family caregiver of a patient with ALS: What are the experiences and coping strategies after bereavement**

Dr Lone Knudsen

**COG-05 The need for parental support when a parent has ALS – based on the ill parents' and the co-parents' perspectives**

R.N Anneli Ozanne

**COG-06 Adolescents' need for professional support when living with a parent with ALS – based on both the adolescents' and the parents' experiences**

Mrs Nina Malmstr om

**COG-07 How to identify and measure emotional distress in motor neurone disease**

Ms Niamh Appleby

**COG-08 Light the Way: Experience of psychological distress reaction and adaptation to genetic test results in an online platform for genetic education counseling testing and support**

Dr Paul Wicks

**COG-09 Cognitive impairment in patients with ALS from Sweden**

Dr Linn  ijerstedt

**COG-10 Patient and technical feasibility of real-world sampling of cognition and functional neurophysiology in ALS and FTD**

Dr Florentine Barbey

**COG-11 Longitudinal cognitive assessment using the Cumulus home-based EEG platform in ALS and FTD**

Dr Emmet Costello

**COG-12 Validity and reliability measures of the Swedish Karolinska version of the Edinburgh Cognitive and Behavioral ALS Screen (SK-ECAS)**

Mrs Juliette Foucher

**COG-13 Normative data and the influence of age and education on cut-off values: Dutch alternative versions (B and C) of the Edinburgh Cognitive and Behavioral ALS Screen (ECAS)**

Ms Fenna Hiemstra

**COG-14 Development and Interrater Reliability of the Motor Domain for the Multidomain Impairment Rating (MIR) Scale in Frontotemporal Lobar Degeneration: Data from the ALLFTD Consortium**

Dr Toji Miyagawa

**COG-15 Cognitive Impairment and Mental Capacity to Make Treatment Decisions in MND: Preliminary Findings**

Dr Milena Contreras

**COG-16 Sentence comprehension deficits in ALS**

Dr Judith Machts

**COG-17 Investigating the potential of an online speech and language intervention for individuals with primary progressive aphasia in Italy: a feasibility and clinical effectiveness study**

Dr Christian Lunetta

**COG-18 Differential impairment in facial emotion recognition among subtypes of Amyotrophic Lateral Sclerosis patients: A Comparative Study**

Dr Antonia Meyer

**COG-19 Psychiatric diseases and Amyotrophic Lateral Sclerosis: A bidirectional mendelian randomization study**

Professor Qi Niu

**COG-20 The quality of life of adult male patients with spinal muscular atrophy and spinal and bulbar muscular atrophy**

Mr Vanja Viric

**COG-21 Expanding social participation opportunities and psychological impacts on rehabilitation of life with ALS using the HeartyPresenter Software for individuals with severe disabilities**

Mr Hajime Takano

**COG-22 Self-compassion intervention for people living with amyotrophic lateral sclerosis: A feasibility and acceptability pilot study**

Dr Marion Sommers-Spijkerman

## **Theme 12 - Clinical Management and Support**

**CMS-01 The use of Telehealth to reduce barriers in access to multidisciplinary team care and improve health outcomes for those with ALS/MND- A mixed-methods systematic Literature Review**

Miss Ana Rita Gameiro Costa

**CMS-02 Virtual nurse health coaching in the setting of ALS care**

Dr Andrew Geronimo

**CMS-03 The perspectives of patients and their family members on the development and use of technology-based tools for the measurement of physical functioning remote monitoring and telemedicine in MND**

Ms Avril Mc Tague

**CMS-04 Algorithm-based recommendations as a clinical decision support system in the provision of assistive technology devices for ALS**

Professor Christoph Münch

**CMS-05 Evaluation of a Remote Monitoring and Communication System (TiM) for Patients with MND and their Carers: A Survey of Healthcare Professionals' Perspectives of Using the System**

Mr David Murphy

**CMS-06 Facilitators of and Barriers to integrating telemonitoring in ALS care: a nationwide implementation study of ALS Home Monitoring & Coaching**

Mrs Ann Katrin Schmidt

**CMS-07 LinkELA: ALS Telemedicine project in Barcelona to facilitate a multidisciplinary follow-up from the patient's home**

Dr Alejandro Caravaca Puchades

**CMS-08 A Study of a Japanese Model of ALS Care: A 24-Hour Home-Visit Care System Enables ALS Patients to Live a High Quality of Life without Family Support**

Mr Hajime Takano

**CMS-09 ALS Satellite Clinics Improve Access for Vulnerable Populations: UCSF ALS satellite clinic patients are more likely to be non-white and elderly yet have higher ALS-FRS-R scores at initial clinic visit**

Mr Bradley Bedell

**CMS-10 ALS/MND patient survey provides clinics with actionable areas of improvement**

Ms M. C. Collet

**CMS-11 Using pre-and post-tests to evaluate the effects of the same e-learning sessions with 6-month intervals twice for students in multiple healthcare disciplines to support communication for people with ALS**

Mr Takemasa Ishikawa

**CMS-12 Clinical Care Practices for Amyotrophic Lateral Sclerosis Patients in Japan During the Coronavirus Disease Pandemic 2019: Current and Future issues**

Shouko Serizawa

**CMS-13 Healthcare Professionals' experiences of providing care for people living with amyotrophic lateral sclerosis (ALS) and their family caregivers: A scoping literature review**

Miss Megan Walls

**CMS-14 Quality of Life and its components: Informal caregivers in Ireland over the course of ALS**

Miss Megan Walls

**CMS-15 Improving online caregiver training for ALS patients in Italy: a two-year update**

Stella Gagliardi

**CMS-16 Perceived benefits from peer-support among family caregivers of people with amyotrophic lateral sclerosis and cognitive impairments in a palliative rehabilitation blended online learning program**

Dr Lene Klem Olesen

**CMS-17 An innovative team approach to early goals of care discussions in ALS patient care**

Anne Shields

**CMS-18 Retrospective analysis of the racial diversity in invasive ventilation decisions by patients with ALS**

Anne Shields

**CMS-19 Person centered nursing visits after diagnosis**

Mrs Katarina Johansson

**CMS-20 The Impact of Personalized Prognostic Information for Patients with Amyotrophic Lateral Sclerosis**

Dr Xiaowei Su

**CMS-21 Enhancing Diagnostic Efficiency in ALS: A Comprehensive Review of Factors to Reduce Diagnosis Delay**

Dr Leonard Van Den Berg

**CMS-22 Improvement of survival of ALS patients over the years in a large clinic cohort**

Mr Yahel Cohen

**CMS-23 Motor neurone disease: a point-prevalence study of patient reported symptom prevalence. Severity and palliative care needs**

Dr Fiona Runacres

**CMS-24 Perceptions and needs regarding end of life care in patients with amyotrophic lateral sclerosis**

Dr Fouke Ombelet

**CMS-25 Respiratory function survival and NIV prevalence over time in ALS - a retrospective study from PRECISION ALS**

Dr Stefan Sennfalt

**CMS-26 Real-world evidence for the effect of riluzole treatment on survival in patients with Amyotrophic Lateral Sclerosis: a retrospective analysis of PRECISION-ALS**

Dr. Rosario Vasta



**CMS-27 Resting tidal breathing to predict SVC in ALS: A new application of Thoracic Electrical Impedance Tomography**

Dr Seward Rutkove

**CMS-28 Responsibility in caring for those with MND and ventilation at the end of life: bereaved family member perspectives**

Dr Eleanor Wilson

**CMS-29 Current Status of Decision-Making Process for Tracheostomy in Korean ALS patients**

Dr Seok-Jin Choi

**CMS-30 Influence of familial experience on the decision-making process for ventilation in familial amyotrophic lateral sclerosis: A qualitative single-case study**

Ms Juri Sawada

**CMS-31 Withdrawal of mechanical ventilation in amyotrophic lateral sclerosis patients: a multicenter Italian survey**

Dr Cristina Moglia

**CMS-32 How to prevent choking at the end of life with NPPV**

Professor Mieko Ogino

**CMS-33 Early signs of dysphagia in persons with ALS**

Mrs Petra Backman

**CMS-34 The impact of diabetes mellitus on the respiratory function of Amyotrophic Lateral Sclerosis patients**

Professor Susana Pinto

**CMS-35 Evaluating the efficacy of meeting energy requirements on ALS progression and survival**

Ms Amber R. Sewell-Green

**CMS-36 Development of a complex online intervention to support high calorie diets for people with ALS: OptICALS**

Professor Paul Norman

**CMS-37 Weight loss risk prediction in amyotrophic lateral sclerosis**

Dr David Lester

**CMS-38 A prospective observational study on the impact of sarcopenia and malnutrition in patients with ALS**

Dr Christian Lunetta

**CMS-39 A Retrospective Case Note Audit of the Nutritional Status of Patients with Motor Neurone Disease referred for gastrostomy insertion at a tertiary hospital and UK MND Care Centre**

Mrs Justyna Reinert

**CMS-40 An Exploration of the Association of Speech Function and the Quality of Life of People Living with ALS**

Dr Kathryn Connaghan

**CMS-41 Impact of Cognitive Impairment from Frontotemporal Dementia Spectrum Disorder on Quality-of-Life Outcomes in Amyotrophic Lateral Sclerosis**

Miss Ariana Andere

**CMS-42 Acceptability and feasibility of the MiNDToolkit intervention for management of behavioural symptoms in MND: views and experiences of healthcare professionals**

Dr Thando Katangwe-Chigamba

**CMS-43 Interplay of Depression Anxiety and Fatigue in Appetite Loss in Motor Neuron Disease: Findings from a Prospective Case-Control Study**

Ms Sally Neville

**CMS-44 Venous thromboembolism in amyotrophic lateral sclerosis**

Dr Michael Trubshaw

**CMS-45 Relationship between anthropometry and ultrasound in patients with ALS**

Miss Jeniffer Danielle Machado Dutra

**CMS-46 Frequency of SOD1 and FUS mutations in a multicenter screening program in Germany – implication for early access program and clinical trial enrollment**

Ms Peggy Schumann

**CMS-47 POSTER WITHDRAWN**

**CMS-48 What barriers do clinicians face in carrying out MND genomic testing? Results from a UK survey**

Dr Jade Howard

**CMS-49 Fear of Falling As a Predictor of Falls in Patients with Motor Neuron Disease**

Ms. Shara Holzberg

**CMS-50 Exploring treatment burden and adherence to treatment in ALS patients: a prospective multicentric study**

Dr Andrea Lizio

**CMS-51 Patient preferences in the treatment of amyotrophic lateral sclerosis with riluzole: data from the Italian cohort of the Patient Preference Study**

Dr Alberto Doretti

**CMS-52 Relyvrio Access Rate in Patients with Amyotrophy Lateral Sclerosis: Experience at One Center**

Dr Mansoureh Mamarabadi

**CMS-53 Investigating geographical differences in time from ALS symptom onset to key disease milestones: data from a real-world survey**

Dr Paulos Gebrehiwet

**CMS-54 Global Fundamental Rights in ALS/MND Survey: A look into the global results**

Ms Jessica Mabe

**Biomedical Work in Progress**

**BW-01 POSTER WITHDRAWN**

**Biomedical and clinical work in progress  
BW-02 Developing a stimulation-free Remote Motor Unit Number Estimate (Remune)**

Miss Judith Bilgorai

**BW-03 POSTER WITHDRAWN**

**Biomedical and clinical work in progress  
BW-04 Towards raising monoclonal antibodies against pathogenic fibrils of TDP-43 and FUS for therapeutic and diagnostic use in ALS**

Dr Aliza Borenshtein-katz

**BW-05 Role of Chitinase proteins in the activation of macrophages and modulating neuroinflammation in ALS**

Ms Chelsea Tran

**BW-06 Human-centric neuromuscular organ-chip platform for drug discovery in MND**

Miss Sophie Burling

**BW-07 Single-cell transcriptomics reveal the presence of clonally expanding T cells in ALS**

Dr Zhenzhen Chen

**BW-08 Investigating Cell-Type Specific miRNA Dysregulation in Amyotrophic Lateral Sclerosis**

Dr Hamish Crerar

**BW-09 Blood-based biomarkers in C9orf72: RNA-foci and DPRs in PBMCs**

Ms Julie De Houwer

**BW-10 Characterization of pathological cellular changes in familial and sporadic ALS using differentiated human motor neurons**

Dr Sandra de la Fuente Ruiz

**BW-11 Auto-reactive T cells in Amyotrophic lateral sclerosis**

Dr Elie Deeba

**BW-12 Identification and Clinical Significance of the “Motor Band Sign in Patients with ALS and Variants Using Longitudinal Fast High-Isotropic-Resolution Magnetic Resonance Imaging**

Dr Frank Diaz

**BW-13 Investigating the potential of apathy subtypes as a clinical predictor in ALS**

Mrs Juliette Foucher

**BW-14 A multicenter open-labeled 24-week single-group phase 2 trial of EPI-589 in ALS (EPIC-ALS)**

Yuishin Izumi

## Posters

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**BW-15 Dipeptide-repeat proteins cause cytoskeletal disorganisation in C9orf72-Motor Neurone Disease**

Miss Charlotte Gale

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**BW-16 Sporadic ALS Australia Systems Genomics Consortium: SALSA-SGC**

Ms Anjali Henders

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**BW-17 Graphene Quantum Dots alleviate TDP-43 aggregation-mediated phenotype of amyotrophic lateral sclerosis**

Professor Young Bin Hong

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**BW-18 Lymphocyte subsets and psychiatric and cognitive outcomes in ALS patients**

Mr Yihan Hu

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**BW-19 Mediterranean Dietary Pattern at Middle Age and Risk of Amyotrophic Lateral Sclerosis**

Miss Emily Joyce

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**BW-20 Exploring the Involvement of Endogenous Retroviruses in Amyotrophic Lateral Sclerosis with Transcriptomic Analyses**

Dr Alfredo Iacoangeli

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**BW-21 POSTER WITHDRAWN**

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**BW-22 A review of lifetime physical activity levels in a Brain Bank MND donor cohort**

Miss Jaimee Kennedy

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**BW-23 Multi-modal detection of changes in MND for the quantitative evaluation of response to 3K3A-APC treatment**

Mr Max Kirkby

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**BW-24 Integrative Multi-Omics Analysis For Enhanced Molecular Subtyping of Sporadic ALS**

Ms Heather Marriott

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**BW-25 Evaluating the characteristics of Evoked High-Frequency Oscillatory Responses as a potential biomarker for sensorimotor dysfunction in ALS: A Preliminary Study**

Mr Prabhav Mehra

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**BW-26 Prevalence of ALS in all 50 States in the United States. Data from the National ALS Registry 2010-2018**

Dr Paul Mehta MD

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**BW-27 Preliminary investigations into the use of combining art and lay summaries to enhance public understanding of MND Papers**

Dr Rick Nelms

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**BW-28 Geographic and socioeconomic comparison of time to significant clinical milestones in patients with amyotrophic lateral sclerosis in urban and rural environments in California**

Ms Kyra Neylan

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**BW-29 Multiplexed protein imaging of cells and neurons with SIMPL-IF**

Dr Michel Nofal

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**BW-30 Cognitive endophenotypes in familial ALS: a longitudinal study**

Mr Colm G Peelo

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**BW-31 Quantifying auditory networks disruption in ALS**

Ms Serena Plaitano

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**BW-32 Quantitative analysis of cortical iron accumulation in MAPT GRN- and C9orf72-associated frontotemporal lobar degeneration based on susceptibility MRI and histology**

Ms Fieke Prinse

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**BW-33 Profiling Hypothalamic Energy Homeostasis Associated microRNA in Myotonic Dystrophy Type 1 Amyotrophic Lateral Sclerosis with Cognitive Impairment (ci) and/or Behavioral Impairment (bi) and healthy controls**

Ms Neila Raveen

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**BW-34 Phase 3b Extension Study Evaluating Superiority of Daily vs Approved On/Off Oral Edaravone Dosing in patients with ALS**

Dr Stephen Apple

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**BW-35 POSTER WITHDRAWN**

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**BW-36 The premodials project: identification of a disease signature for presymptomatic and early ALS**

Dr Laura Tzeplaeff

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**BW-37 A comprehensive network meta-analysis to augment and prioritize therapeutic strategy development for ALS**

Mr Floris T. Van Loon

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**BW-38 Serum Glial Fibrillary Astrocytic Protein in Patients with Amyotrophic Lateral Sclerosis**

Dr Maria Janina Wendebourg

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**BW-39 The Robert Packard Center for ALS Research**

Mrs Suzanne Connelly

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**BW-40 Rebalancing the motor circuit restores movement in a Caenorhabditis elegans model for TDP-43-toxicity**

Professor Ellen Nollen

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**Care Practice/Work in Progress**

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**CW-01 Translating the Extended Life Expectancy of US Veterans with ALS**

Mrs Mandi Bailey

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**CW-02 The dietitian's role in the multidisciplinary ALS/MND team at Uppsala University Hospital Sweden**

Mrs Bitu Banieghbal

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**CW-03 Harnessing technology to support cough and secretion problems in Motor Neuron Disease (MND)**

Ms Charlotte Massey

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**CW-04 CIBUS-ALS: A tool to evaluate pre-morbid eating behaviors dietary habits and food preferences in ALS**

Dr Christian Lunetta

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**CW-05 Development and evaluation of the ANSWeR (Mobile app-based ALS Navigation for Supporting Well-being and Readiness) for people with amyotrophic lateral sclerosis and families: A protocol**

Professor Juyeon Oh

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**CW-06 Real-World Experience and Strategies to Enhance the Palatability of the Combination Sodium Phenylbutyrate and Taurursodiol for the Treatment of Amyotrophic Lateral Sclerosis**

Kelly Fox

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**CW-07 Application of standardized assessments in patients with neuromuscular diseases: Benefits and practicability for physiotherapists and patients**

Miss Maj-Britt Bartels

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**CW-08 Let's Talk About It; A mental health series**

Miss Katrina Byrd

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**CW-09 Write Here; Writers living with or impacted by ALS and Community Created Intervention**

Miss Katrina Byrd

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**CW-10 Caring for the Homebound Patient with ALS**

Dr Keelie Denson

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**CW-11 A population-based approach to funding ALS care in Ontario Canada**

Mr Simon Kuzyl

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**CW-12 Interim Findings on a Concurrent mixed method exploration of the experiences of living with Motor Neurone Disease (MND) and caring for people living with MND during the Covid-19 pandemic in the United Kingdom**

Mrs Helen Brewah



## Summary of events/locations

### Tuesday 5 December

09.00 – 12.30	WFN ALS/MND Speciality Group <i>Rio, Level 2</i>
13.30 – 16.00	ENCALS <i>Sydney, Level 2</i>
16.00 – 19.00	Project MinE (closed meeting) <i>Sydney, Level 2</i>
16.00 – 18.00	Registration International Symposium <i>Foyer, Level 2</i>
18.00 – 19.30	'Welcome Back' Drinks Reception <i>Foyer, Level 2</i> (sponsored by Cytokinetics)
17.45 – 18.45	Paulo Gontijo Institute PG Award <i>MCH Lounge, Messe Basel, Ground Floor</i> (closed meeting)

### Wednesday 6 December

07.00 – 18.00	Registration International Symposium <i>Foyer, Level 2</i>
07.00 – 18.00	Speaker Room <i>Mexico, Level 2</i>
08.30 – 10.30	Symposium Joint Opening Session <i>San Francisco, Level 3</i>
10.30 – 11.00	Refreshments, Networking and Exhibitors <i>Foyer, Level 2</i>
11.00 – 12.30	Symposium Biomedical Session 2A <i>San Francisco, Level 3</i>
11.00 – 12.30	Symposium Clinical Session 2B <i>Singapore, Level 2</i>
11.00 – 12.40	Symposium Alternative Session 2C <i>Montreal, Level 2</i>
12.30 – 14.00	Lunch and Networking <i>Event Halle, Messe Basel, Ground Floor</i> Exhibitors <i>Foyer, Level 2</i>
14.00 – 15.30	Symposium Biomedical Session 3A <i>San Francisco, Level 3</i>
14.00 – 15.30	Symposium Clinical Sessions 3B <i>Singapore, Level 2</i>
14.00 – 15.30	Symposium Alternative Session 3C <i>Montreal, Level 2</i>
15.30 – 16.00	Refreshments, Networking and Exhibitors <i>Foyer, Level 2</i>
16.00 – 17.45	Symposium Biomedical Session 4A <i>San Francisco, Level 3</i>
16.00 – 17.40	Symposium Clinical Session 4B <i>Singapore, Level 2</i>
16.00 – 17.45	Symposium Alternative Session 4C <i>Montreal, Level 2</i>
17.45 – 19.45	Poster Session A <i>Event Halle, Messe Basel, Ground Floor</i>

### Thursday 7 December

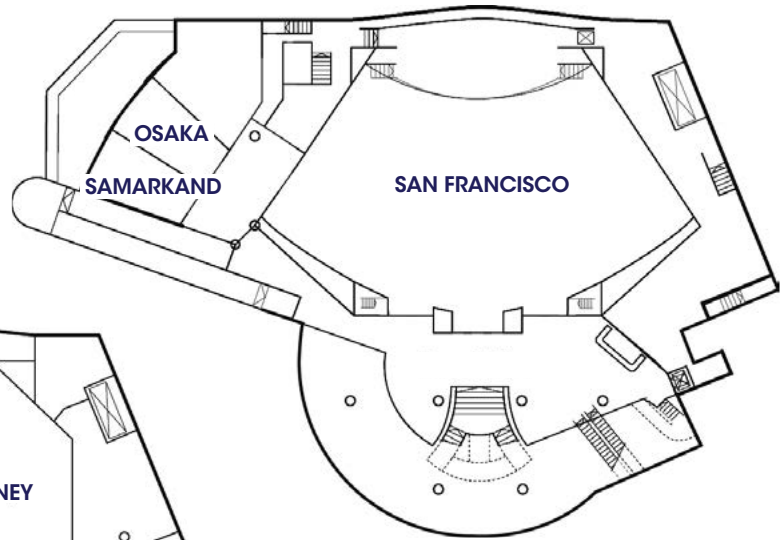
07.00 – 18.00	Registration International Symposium <i>Foyer, Level 2</i>
07.00 – 18.00	Speaker Room <i>Mexico, Level 2</i>
07.00 – 08.30	Non-CME Industry Breakfast Session - Learnings in ALS over the last 10 years <i>Sydney, Level 2</i>
08.30 – 10.00	Symposium Biomedical Session 5A <i>San Francisco, Level 3</i>

08.30 – 10.00	Symposium Clinical Session 5B <i>Singapore, Level 2</i>
08.30 – 10.00	Symposium Alternative Session 5C <i>Montreal, Level 2</i>
10.00 – 10.30	Refreshments, Networking and Exhibitors <i>Foyer, Level 2</i>
10.30 – 12.30	Symposium Biomedical Session 6A <i>San Francisco, Level 3</i>
10.30 – 12.30	Symposium Clinical Session 6B <i>Singapore, Level 2</i>
10.30 – 12.30	Symposium Alternative Session 6C <i>Montreal, Level 2</i>
12.30 – 14.00	Lunch and Networking <i>Event Halle, Messe Basel, Ground Floor</i> Exhibitors <i>Foyer, Level 2</i>
13.00 – 14.00	Neuroinflammation and Cell Death in ALS and Considerations for Clinical Trials (Sanofi) <i>Rio, Level 2</i>
14.00 – 15.30	Symposium Biomedical Session 7A <i>San Francisco, Level 3</i>
14.00 – 15.30	Symposium Clinical Session 7B <i>Singapore, Level 2</i>
14.00 – 15.30	Symposium Alternative Session 7C <i>Montreal, Level 2</i>
15.30 – 16.00	Refreshments, Networking and Exhibitors <i>Foyer, Level 2</i>
16.00 – 17.30	Symposium Biomedical Session 8A <i>San Francisco, Level 3</i>
16.00 – 17.30	Symposium Clinical Session 8B <i>Singapore, Level 2</i>
16.00 – 17.30	Symposium Alternative Session 8C <i>Montreal, Level 2</i>
17.45 – 19.45	Poster Session B <i>Event Halle, Messe Basel, Ground Floor</i>

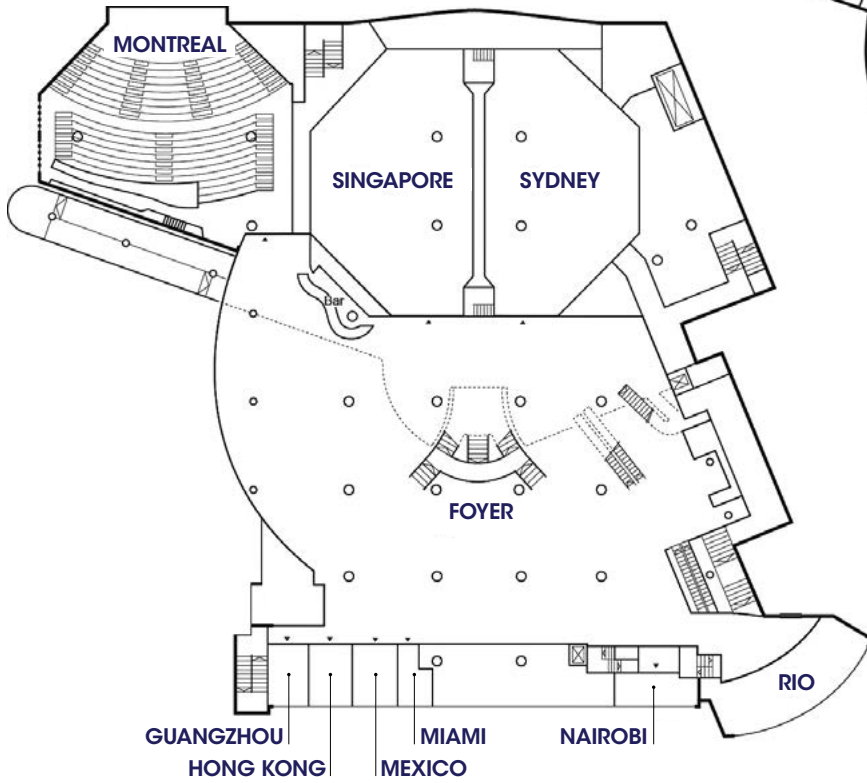
### Friday 8 December

08.00 – 12.30	Registration International Symposium <i>Foyer, Level 2</i>
07.00 – 14.00	Speaker Room <i>Mexico, Level 2</i>
07.00 – 08.30	Non-CME Industry Breakfast Session - Clinical Trials in ALS: What have we learned the next opportunities? <i>Sydney, Level 2</i>
08.30 – 10.00	Symposium Biomedical Sessions 9A <i>San Francisco, Level 3</i>
08.30 – 10.00	Symposium Clinical Session 9B <i>Singapore, Level 2</i>
08.30 – 10.00	Symposium Alternative Session 9C <i>Montreal, Level 2</i>
10.00 – 10.30	Refreshments, Networking and Exhibitors <i>Foyer, Level 2</i>
10.30 – 12.30	Symposium Clinical Sessions 10A <i>San Francisco, Level 3</i>
10.30 – 12.30	Symposium Biomedical Session 10B <i>Singapore, Level 2</i>
10.30 – 12.30	Symposium Alternative Session 10C <i>Montreal, Level 2</i>
12.30 – 14.00	Lunch and Networking <i>Event Halle, Messe Basel, Ground Floor</i> Exhibitors <i>Foyer, Level 2</i>
14.00 – 15.30	Symposium Joint Closing Session <i>San Francisco, Level 3</i>

## LEVEL 3

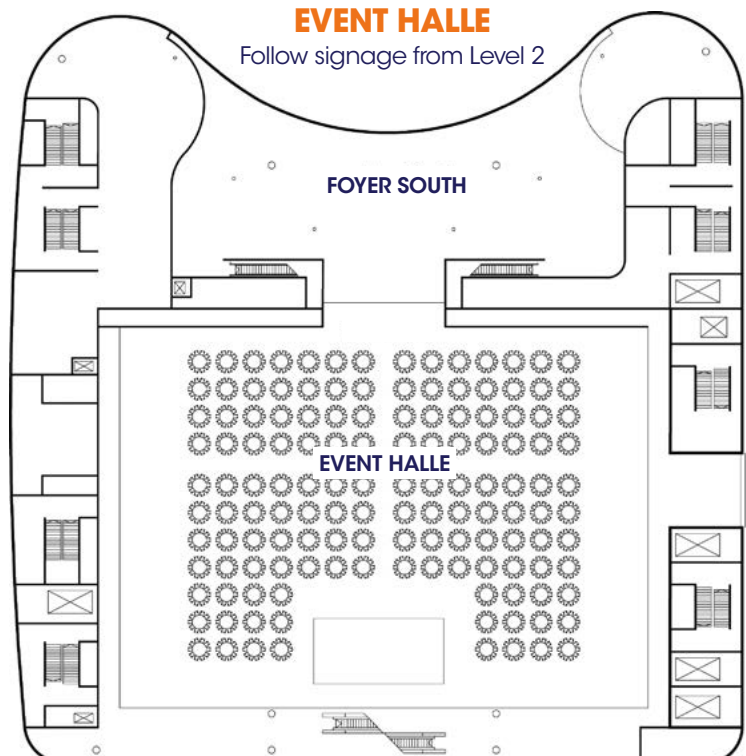


## LEVEL 2



## EVENT HALLE

Follow signage from Level 2



## Exhibitors

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Please visit our exhibitors, located in the Level 2 Foyer  
(more information can be found on our website, [www.symposium.mndassociation.org](http://www.symposium.mndassociation.org), and on the Symposium App)

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### GOLD EXHIBITORS



### SILVER EXHIBITORS



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