mnda motor neurone disease association

30th international symposium on ALS/MND

30th international symposium on ALS/MND

Perth Australia

4 – 6 December 2019

Programme

Hosts:

MND Australia, in partnership with MND WA

mnd Australia mnd Western Australia

Organised by the Motor Neurone Disease Association in co-operation with the International Alliance of ALS/MND Associations

Organiser of the Symposium:

Motor Neurone Disease Association
10-15 Notre Dame Mews, Northampton NN1 2BG, UK
Tel: (-) 44 1604 250505
Email: symposium@mndassociation.org
Website: www.mndassociation.org

Hosts for the Symposium:

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Website: www.mndawa.asn.au

Held in co-operation with:

The International Alliance of ALS/MND Associations
Email: alliance@als-mnd.org
Website: www.alsmndalliance.org

CME Accreditation

The 30th International Symposium on ALS/MND has been approved by the Federation of the Royal College of Physicians of the United Kingdom for 18 category 1 (external) CPD credit(s).

The **30th International Symposium on ALS/MND, Perth, Australia, 4 December 2019 – 6 December 2019** has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 13 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

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

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

Welcome

On behalf of MND Australia and MND Western Australia, I extend a warm welcome to delegates of the 30th International Symposium on ALS/MND, the 27th meeting of the International Alliance of ALS/MND Associations and the 17th Allied Professionals Forum. Much has changed over the last 30 years. The number of people attending the Symposium and the number of platform and poster presentations have increased dramatically, demonstrating a sustained growth in interest and investment in ALS/MND research globally. The breadth of meetings has also grown in response to the urgent need to improve care and support and accelerate access to clinical trials as the search for an end to ALS/MND continues.

MND Australia and its members, the State MND Associations, form the only national network focused on improving the lives of all Australians living with motor neurone disease (MND). For over 35 years this national network has helped increase understanding of the disease and advocate for improvements in its treatment and care to ensure people living with MND have the best quality-of-life possible. Investment in research is a priority, and through the MND Research Institute of Australia, the research arm of MND Australia, over the last 32 years more than $32 million donated by the Australian community has been invested in research with the greatest chance of realising our collective vision of a world without MND.

This year's program clearly demonstrates the fruits of investment in research, the commitment to improving the lives of people living with ALS/MND and the depth and breadth of research efforts globally. Now is a time of great hope for the ALS/MND community and it is with this in mind that we extend a special welcome to people living with ALS/MND to the meetings in Perth and look forward to their contributions, questions and insights.

The International Symposium on ALS/MND is quite unique in bringing together researchers, clinicians, health professionals, ALS/MND associations and people living with ALS/MND. We hope that the Perth sunshine and Aussie hospitality will foster further collaborations, sharing of knowledge, innovations and new ideas. We hope that you will be inspired and motivated to continue the work you do to improve the lives of people living with ALS/MND and to share what you have learned with your colleagues on your return home. Together we will defeat ALS/MND.

Perth is Australia's sunniest city and easy to get around so please enjoy your time with us and take time out of the busy schedule to explore and experience all Perth, and its surrounds, has to offer.

Carol Birks

CEO, MND Australia

Foreword

A warm welcome to the 30th International Symposium on ALS/MND, in the wonderful city of Perth, for what has become the most important event of the year for researchers and clinicians working in the field of motor neuron disease.

The most notable scientific discovery to have come out of Western Australia is the famous Nobel Prize winning observation by Barry Marshall and Robin Warren that peptic ulcers are caused by a bacterium, H pylori. The story demonstrates the importance of how radical new hypotheses can change medicine, but also the importance of rigorous scientific methods to overcome established orthodoxy. Finding effective treatments for ALS/MND is a challenging problem but we are making progress through science.

Each year the Program Committee has the difficult task of selecting invited speakers and choosing platform presentations from the submitted abstracts. The good news is that the task gets more difficult each year, because the quality of scientific work in ALS/MND is increasing dramatically. Nowhere is this more evident than in Australia, a country that consistently achieves more platform presentations than would be expected on the basis of population size.

Many areas of medicine have progressed to a phase of personalised therapeutics, where treatment is based on stratification by individual risk factors. At this meeting we have plenary sessions on design of precision DNA-based therapies and platform presentations on antisense and viral mediated reduction in SOD1 levels, demonstrating that precision medicine is now beginning in ALS. There are also several sessions highlighting the key developments in care that are changing practice and improving the wellbeing of people living with the disease. As always, the Symposium provides renewed hope to bring home to our clinics and laboratories.

Kevin Talbot

Programme Committee Chair

PROGRAMME

Wednesday 4 December 2019

SESSION1
RIVERSIDE THEATRE

JOINT OPENING SESSION

Chairs: S Light (UK) K Talbot (UK)

08.30 – 08.35
Welcome – *S Light (UK) and K Talbot (UK)*

08.35 – 08.45
Welcome from Host Association/Welcome to Country ceremony
D Ali/O Whalley

08.45 – 09.20
C1 Glymphatic system dysfunction as a driver of protein mis-aggregation in neurodegenerative disease
J Iliff (USA)

09.20 – 09.55
C2 The biomarker challenge: What is it and are we nearly there?
M Turner (UK)

09.55 – 10.05
International Alliance Humanitarian Award

10.05 – 10.25
IPG Award and winner's research presentation

10.30 – 11.00
REFRESHMENTS, NETWORKING AND EXHIBITORS:
Riverside Theatre Foyer

SESSION 2A
BELLEVUE BALLROOM 2

PROTEOSTASIS / PROTEOTOXICITY

Chairs: J Atkin (Australia) J Robertson (Canada)

11.00 – 11.30
C3 The fine balance of proteostasis and its implications for ALS
J Yerbury (Australia)

11.30 – 11.45
C4 Cytoplasmic TDP-43 alters the solubility and abundance of numerous proteins in ALS/FTD pathology
T Hedl (Australia)

11.45 – 12.00
C5 Monitoring autophagy dynamics in motor neurons in vivo using a novel reporter mouse model of ALS shows early impairment of autophagy flux
N Perera (Australia)

12.00 – 12.15
C6 Selective clearance of misfolded SOD1 delays disease onset in animal models of ALS
J Kong (Canada)

12.15 – 12.45
C7 Non-protein amino acids and neurodegenerative disease
K Rodgers (Australia)

SESSION 2B
RIVERSIDE THEATRE

CLINICAL TRIALS

Chairs: L van den Berg (Netherlands) D Rowe (Australia)

11.00 – 11.30
C8 The ALS Platform Trial: Design considerations and statistical efficiencies
B Saville (USA) and S Paganoni (USA)

11.30 – 11.50
C9 A phase Ib/IIa Open Label trial of MN-166 (ibudilast) in ALS: A biomarker endpoint-based clinical trial
S Babu (USA)

11.50 – 12.10
C10 Modulation of innate immunity by MSC-NTF cells (NurOwn®) correlates with ALS clinical outcomes
R Kern (Israel)

12.10 – 12.30
C11 Safety, PK, PD and exploratory efficacy in single and multiple dose study of a SOD1 antisense oligonucleotide (tofersen) in participants with ALS
T Miller (USA)

SESSION 2C
MEETING ROOMS 1-3

CLINICAL ELECTROPHYSIOLOGY

Chairs: S Vucic (Australia) M de Carvalho (Portugal)

11.00 – 11.15
C12 Novel threshold tracking TMS assessment of trancallosal inhibition identifies potential mechanism for interhemispheric disease spread
M van den Bos (Australia)

11.15 – 11.30
C13 Cortical hyperexcitability and cognitive dysfunction in ALS
M Higashihara (Australia)

11.30 – 11.45
C14 Spinal hyperexcitability in ALS is extrinsic to motoneurons
V Marchand-Pauvert (France)

11.45 – 12.00
C15 Asymmetry of cortical dysfunction identifies regions of onset and relates to clinical heterogeneity in ALS
T Dharmadasa (Australia)

12.00 – 12.15
C16 Neurophysiological index is associated with the survival of patients with ALS
B Cao (China)

12.15 – 12.30
C17 The split hand in ALS: A possible role for the neuromuscular junction
M de Carvalho (Portugal)

12.30 – 12.45
C18 The rise and fall of fasciculations in amyotrophic lateral sclerosis
J Bashford (UK)

12.30 – 14.00 LUNCH AND NETWORKING: Bellevue Ballroom 1/Bellevue Foyer
EXHIBITORS: Riverside Theatre Foyer

SESSION 3A
BELLEVUE BALLROOM 2

SYNAPTIC PATHOLOGY

Chairs: L Greensmith (UK)
T Dickson (Australia)

14.00 – 14.30
C19 Neuromuscular degeneration in ALS and SMA
H Nishimune (USA)

14.30 – 14.50
C20 Modeling ALS: Human neuromuscular junctions in a dish
K Dittlau (Belgium)

14.50 – 15.10
C21 Loss of c9orf72: A problem at the synapse?
J Robertson (Canada)

15.10 – 15.30
C22 Can oestrogen protect against the synaptic plasticity deficits that underlie motor cortex dysfunction in ALS?
C Blizzard (Australia)

SESSION 3B
RIVERSIDE THEATRE

DEMOGRAPHICS AND CLINICAL FEATURES

Chairs: C Armon (Israel) A Chio (Italy)

14.00 – 14.30
C23 ALS: Phenotypes, demographics and clinical management in Asia
N Shahrizaila (Malaysia)

14.30 – 14.50
C24 Prognosis and clinical features of ALS patients in Japan
N Atsuta (Japan)

14.50 – 15.10
C25 ALS in Latin America: A population-based incidence study in three countries
O Hardiman (Ireland)

15.10 – 15.30
C26 How frequent are pauses in ALS progression? Results from a population-based cohort
A Calvo (Italy)

SESSION3C
MEETING ROOMS 1-3

GENOMICS

Chairs: N Wray (Australia) A Al-Chalabi (UK)

14.00 – 14.30
C27 Future directions in ALS genomics
N Wray (Australia)

14.30 – 14.45
C28 GWAS in ALS identifies novel loci and insight into the genetic architecture
J Veldink (Netherlands)

14.45 – 15.00
C29 Genome-wide meta-analysis identifies new loci associated with ALS and links body mass index with disease genetics
A Iacoangeli (UK)

15.00 – 15.15
C30 Unbiased genome-wide screen identifies new ALS risk variants within gene-regulatory elements
J Cooper-Knock (UK)

15.15 – 15.30
C31 Computational efficient method to detect genetic interactions associated with age of onset in an ALS genome-wide association study
J Gui (USA)

15.30 – 16.00 REFRESHMENTS, NETWORKING AND EXHIBITORS: Riverside Theatre Foyer

Welcome to Perth

SESSION 4A
BELLEVUE BALLROOM 2

THERAPEUTIC STRATEGIES

Chairs: L Van Den Bosch (Belgium) L Bruijn (UK)

16.00 – 16.30
C32 Designer DNA drug therapy for human neurodegenerative disease
D Cleveland (USA)

16.30 – 17.00
C33 iPSC-derived models for genetic and compound screening in ALS
S Finkbeiner (USA)

17.00 – 17.15
C34 An AI drug discovery case study establishing new neuroprotective compounds for treating ALS
R Paul (UK)

17.15 – 17.30
C35 Machine learning to accelerate drug discovery: A novel small molecule rescues ALS phenotypes in preclinical models
I Choi (USA)

17.30 – 17.45
C36 Relevance of the therapeutic agent CuATSM to sporadic ALS
P Crouch (Australia)

SESSION 4B
RIVERSIDE THEATRE

NON-MOTOR SYMPTOMS

Chairs: G Mora (Italy) R Radakovic UK)

16.00 – 16.30
C37 Pseudobulbar affect in ALS: Not (only) a laughing matter
E Pioro (USA)

16.30 – 16.50
C38 Psychosis risk states in FTD-MND
A Wilcox (UK)

16.50 – 17.10
C39 Progression of cognitive and behavioural impairment in early ALS
J Raaphorst (Netherlands)

17.10 – 17.25
C40 Association between oculomotor dysfunction and cognitive impairment in ALS
N Ticozzi (Italy)

17.25 – 17.40
C41 Cognitive dysfunction as an endophenotype in C9orf72 positive ALS
M Ryan (Ireland)

SESSION 4C
MEETING ROOMS 1-3

EMERGING TISSUE BIOMARKERS

Chairs: J Costa (Portugal) R Bowser (USA)

16.00 – 16.20
C42 Disease progression in ALS: Cell senescence and metabolism in the driving seat
A Malaspina (UK)

16.20 – 16.40
C43 Myeloid cells and complement c5aR1 are associated with clinical features in ALS patients
T Woodruff (Australia)

16.40 – 17.00
C44 Chitotriosidase level and activity rises in the pre- and early symptomatic phases of ALS
A Thompson (UK)

17.00 – 17.20
C45 Isolation and enrichment of neural-derived exosomes from plasma of ALS patients and characterisation of their miRNAome using next-generation sequencing
R Dunlop (USA)

17.20 – 17.40
C46 Identification of new plasma-based biomarkers for ALS by RNA sequencing of leukocytes
Y Chen (China)

18.00 – 20.30 GLOBAL WALK TO D'FEET FOLLOWED BY BARBECUE RECEPTION

Global Walk to d'feet MND

Thursday 5 December 2019

SESSION 5A
BELLEVUE BALLROOM 2

TDP-43

Chairs: C Shaw (UK) P Wong (USA)

08.30 – 08.50
C47 Validation of TDP-43 splicing repression as a therapeutic target for ALS-FTD
P Wong (USA)

08.50 – 09.10
C48 Targeting the nucleocytoplasmic transport machinery: Why does TDP-43 mislocalise?
M Morsch (Australia)

09.10 – 09.30
C49 TDP-43 triggers mitochondrial DNA release to activate cGAS/STING in ALS
A Yu (Australia)

09.30 – 09.45
C50 Detection and quantification of pathological C-terminal TDP-43 fragments in post mortem brain tissue
E Feneberg (UK)

09.45 – 10.00
C51 Super-resolution characterisation of TDP-43 aggregation in ALS
O Kantelberg (UK)

SESSION 5B
RIVERSIDE THEATRE

CARER AND FAMILY SUPPORT

Chairs: M O'Brien (UK) S Aoun (Australia)

08.30 – 09.00
C52 Supporting MND family carers from diagnosis to bereavement: The palliative approach to care
S Aoun (Australia)

09.00 – 09.30
C53 Research and support for young caregivers in families with ALS
M Kavanaugh (USA)

09.30 – 09.45
C54 When the shared journey ends: The enduring impact of ALS on bereaved caregivers
M Galvin (Ireland)

09.45 – 10.00
C55 Individual quality of life among spousal ALS patient-caregiver dyads
M Galvin (Ireland)

SESSION 5C
MEETING ROOMS 1-3

THE SPECTRUM OF MOTOR NEURON DISORDERS

Chairs: P Shaw (UK) H Mitsumoto (USA)

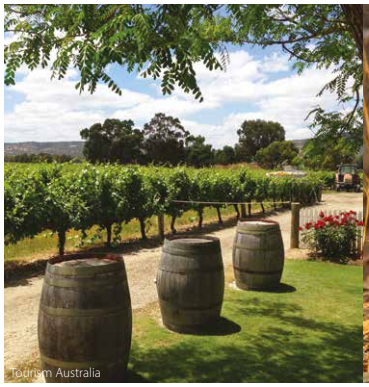
08.30 – 09.00
C56 Lessons from SBMA: Pathophysiology, clinical characteristics and treatment strategies
G Sobue (Japan)

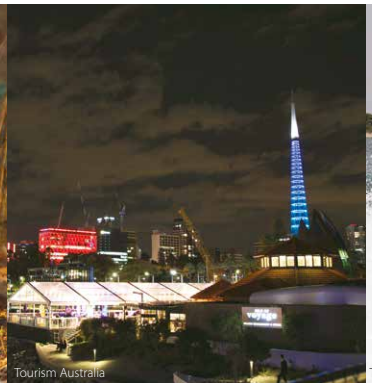
09.00 – 09.30
C57 ALS-PDC of the Kii Peninsula, Japan: Clinical and neuropathological features and epidemiology
S Kuzuhara (Japan)

09.30 – 09.45
C58 Genotype phenotype correlation and longitudinal study of hereditary spastic paraplegia and primary lateral sclerosis
J Statland (USA)

09.45 – 10.00
C59 Infant with MND caused by homozygosity for a SOD1 mutation and no SOD1 enzymatic activity: Implications for clinical trials to depress the level of SOD1
P Andersen (Sweden)

10.00 – 10.30 REFRESHMENTS, NETWORKING AND EXHIBITORS: Riverside Theatre Foyer/Pavilion 1





LOCATION: PAVILION 1

POSTER SESSION A: 10.30 – 12.30

10.30 – 11.30

Theme 1 (EPI): Epidemiology and informatics

Theme 3 (IVT): In vitro experimental models

Theme 5 (HCB): Human cell biology and pathology

Theme 7 (TST): Pre-clinical therapeutic strategies

Theme 9 (CLT): Clinical trials and trial design

Theme 11 (COG): Cognitive and psychological assessment and support

Theme 13 (CMS): Clinical management and support

Theme CP: Care practice

11.30 – 12.30

Theme 2 (GEN): Genetics and genomics

Theme 4 (IVV): In vivo experimental models

Theme 6 (BIO): Tissue biomarkers

Theme 8 (IMG): Clinical imaging and electrophysiology

Theme 10 (DSP): Disease stratification and phenotyping of patients

Theme 12 (RNM): Respiratory and nutritional management

Theme WP: Biomedical and clinical work in progress

12.30 – 14.00 LUNCH AND NETWORKING: Bellevue Ballroom 1/Bellevue Foyer
EXHIBITORS: Riverside Theatre Foyer

SESSION 6A
BELLEVUE BALLROOM 2

HUMAN CELL BIOLOGY AND PATHOLOGY

Chairs: M-L Rogers (Australia) J Prehn (Ireland)

14.00 – 14.30
C60 Investigating the role of endogenous retroviruses in ALS
A Nath (USA)

14.30 – 14.45
C61 Antiviral immune response as a trigger of FUS proteinopathy in ALS
H An (UK)

14.45 – 15.00
C62 Distinct autoimmune antibody responses towards TDP-43 in ALS
T Brudek (Denmark)

15.00 – 15.15
C63 Cell autonomous dysfunction of brain pericytes in ALS: Impaired regulation on interleukin-6 by TDP-43
E Scotter (New Zealand)

15.15 – 15.30
C64 Defective phagocytic function is associated with rapid progression in ALS patients
S Kim (Korea)

SESSION 6B
RIVERSIDE THEATRE

PALLIATIVE CARE

Chairs: D Oliver (UK) S Feldman (USA)

14.00 – 14.40
C65 Palliative care and healthcare utilization at the end of life in people with ALS
L Deliens (Belgium)

14.40 – 15.10
C66 Positive impact of physical exercise on ALS patients' QoL and effective state
D Lulé (Germany) TBC

15.10 – 15.30
C67 A trial of suprascapular nerve block for shoulder pain in motor neuron disease
P Allcroft (Australia)

SESSION 6C
MEETING ROOMS 1-3

NEUROIMAGING

Chairs: N Atassi (USA) P-F Pradat (France)

14.00 – 14.30
C68 Is ALS a network disease?
J Grosskreutz (Germany)

14.30 – 14.50
C69 Disruptions in cortical structures and pathways precede the development of ALS in asymptomatic C9orf72 familial ALS
N Geevasinga (Australia)

14.50 – 15.10
C70 Spinal cord MRI for early detection of presymptomatic pathology in C9orf72 mutation carriers: A longitudinal neuroimaging study
G Querin (France)

15.10 – 15.30
C71 'Next generation' cervical cord MRI in ALS reveals marked atrophy and corticospinal tract degeneration
P Nestor (Australia)

15.30 – 16.00 REFRESHMENTS, NETWORKING AND EXHIBITORS Riverside Theatre Foyer

SESSION 7A
BELLEVUE BALLROOM 2

GENETICS

Chairs: G Nicholson (Australia) P Andersen (Sweden)

16.00 – 16.20
C72 Association of a poly-T structural variant within the SCAF4 gene and ALS
J Pytte (Australia)

16.20 – 16.40
C73 Intronic structural variant within stathmin 2 gene (STMN2) impacts disease duration in sporadic ALS
F Theunissen (Australia)

16.40 – 17.00
C74 Correlating survival by SOD1 variant in global ALS cohort identifies variants with a strong effect on prognosis
S Opie-Martin (UK)

17.00 – 17.20
C75 Novel software 'TRIBES' enables distant relationship and disease variant discovery in Australian ALS
N Twine (Australia)

17.20 – 17.40
C76 Relatedness mapping and IBD analysis of Australian sporadic ALS/FTD identifies distantly related sALS cases with a mutation in FIG4 and implicates two new genome-wide loci linked to sALS and FTD
K Williams (Australia)

17.40 - 17.50
Late breaking news: Exome sequencing in ALS implicates a novel gene, DNAJC7, encoding a heat-shock protein
A Iacoangeli (UK)

SESSION 7B
RIVERSIDE THEATRE

IMPROVING CARE PRACTICE

Chairs: M Ogino (Japan) M Galvin (Ireland)

16.00 – 16.30
C77 Progressive neurological diseases: Modelling care
S Mathers (Australia)

16.30 – 16.45
C78 Breaking the news of the MND diagnosis: The gap between standards and actual practice
S Aoun (Australia)

16.45 – 17.00
C79 Development of the MiND Toolkit for management of cognitive and behavioural impairment in MND: A modified Delphi method
R Radakovic (UK)

17.00 – 17.15
C80 Terminal Care in patients with MND: A clinical audit of inpatient and community patients
A Kulkarni (Australia)

17.15 – 17.30
C81 Telehealth provides meaningful contributions to patient care in ALS
K Atkins (Australia)

17.30 – 17.45
C82 The impact of mental health on acute health service provision in MND: A big data study
J Trollor (Australia)

SESSION 7C
MEETING ROOMS 1-3

BIOENERGETICS AND METABOLISM

Chairs: J-P Loeffler (France) S Ngo (Australia)

16.00 – 16.15
C83 Metabolic rewiring in ALS
D Zarnescu (USA)

16.15 – 16.30
C84 Manipulation of bioenergetic pathways in motor neuron diseases
H Chaytow (UK)

16.30 – 16.45
C85 Mitochondrial bioenergetic profile in platelets as a biomarker for ALS
M Kazamel (USA)

16.45 – 17.00
C86 Altered skeletal muscle glucose-fatty acid flux in ALS
S Kirk (Australia)

17.00 – 17.15
C87 Metabolic dysfunction in MND: A 31-phosphorous magnetic resonance spectroscopy study
M Sassani (UK)

17.15 – 17.30
C88 Brain metabolic correlates of King's staging system in ALS: A 18F-FDG-PET study
A Chio (Italy)

17.30 – 17.45
C89 Lipids, apolipoproteins and prognosis of ALS
C Ingre (Sweden)

LOCATION: PAVILION 1

POSTER SESSION B: 18.00 – 20.00

18.00 – 19.00
All themes

19.00 – 20.00
Free flow for all delegates around posters

Friday 6 December 2019

SESSION 8A
BELLEVUE BALLROOM 2

DISEASE MODELS

Chairs: L Ferraiuolo (UK) B Turner (Australia)

08.30 – 09.00
C90 Mouse models of ALS: Past, present and future
B Turner (Australia)

09.00 – 09.15
C91 Longitudinal quantitative proteomics reveals distinct biochemical signatures of cortical and spinal cord neurodegeneration and recovery in TDP-43 transgenic mice
A Walker (Australia)

09.15 – 09.30
C92 Golgi dysfunction is an early event associated with TDP-43 pathology formation in ALS
B Berning (Australia)

09.30 – 09.45
C93 Antioxidant drugs reveal the potential for patient stratification in motor neuron disease
C Allen (UK)

09.45 – 10.00
C94 Intrathecal AAV9-SOD1-shRNA administration for ALS
P Allred (USA)

SESSION 8B
RIVERSIDE THEATRE

DYSPHAGIA AND NUTRITIONAL MANAGEMENT

Chairs: F Steyn (Australia) C McDermott (UK)

08.30 – 08.50
C95 Loss of appetite is associated with a loss of weight and fat mass in patients with ALS
F Steyn (Australia)

08.50 – 09.10
C96 Dietary intake in patients with MND: Assessment relative to disease severity and resting energy expenditure
V Chachay (Australia)

09.10 – 09.30
C97 A multidisciplinary pilot study to trial the feasibility and effect of swallowing exercises and diet among people with ALS
V Flood (Australia)

09.30 – 09.50
C98 Validation of the Physiologic Risk Index for Swallowing Impairment (PRISM) in ALS
E Plowman (USA)

10.00 – 10.30 REFRESHMENTS, NETWORKING AND EXHIBITORS: Riverside Theatre Foyer


Eva blue


Notre-Dame Basilica, Stéphan Poulin

SESSION 9A
BELLEVUE BALLROOM 2

IMMUNITY AND INFLAMMATION

Chairs: K Yamanaka (Japan) L Barbeito (Uruguay)

10.30 – 10.50
C99 The role of innate and acquired immunity in neuroinflammation of ALS mice
K Yamanaka (Japan)

10.50 – 11.10
C100 Immunosuppressive functions of M2 macrophages derived from iPSC of ALS patients
W Zhao (USA)

11.10 – 11.30
C101 MCP1-CCR2 and neuroinflammation in the ALS motor cortex with TDP-43 pathology
H Ozdinler (USA)

11.30 – 11.50
C102 Microglial galectin-3 in the spinal white matter is a key molecule for motor neuron degeneration in ALS
S Hayashi (Japan)

11.50 – 12.10
C103 Using patient-derived microglia to investigate neuroinflammation in MND and provide a platform suitable for patient-specific drug screening
H Quek (Australia)

12.10 – 12.30
C104 A nanoparticle-based strategy for treating neuroinflammation in MND
A Wright (Australia)

SESSION 9B
RIVERSIDE THEATRE

RESPIRATORY SUPPORT

Chairs: J Andrews (USA) E Pioro (USA)

10.30 – 11.00
C105 The multidimensional nature of respiratory failure in ALS
C Morélot-Panzini (France)

11.00 – 11.30
C106 The management of disordered breathing in MND
D Berlowitz (Australia)

11.30 – 11.50
C107 Slow vital capacity as a prognostic factor in ALS: A population-based study
A Calvo (Italy)

11.50 – 12.10
C108 A feasibility study of an ambulatory non-invasive ventilation set-up model using intelligent volume assured pressure support mode in MND
W Chow (Australia)

12.10 – 12.30
C109 The physiological effects of a single session of lung volume recruitment in people with MND
N Sheers (Australia)

12.30 – 14.00 LUNCH AND NETWORKING: Bellevue Ballroom 1/Bellevue Foyer
EXHIBITORS: Riverside Theatre Foyer

SESSION 10 RIVERSIDE THEATRE

JOINT CLOSING SESSION

Chairs: K Talbot (UK) M Kiernan (Australia)

14.00 – 14.05
Poster Prizes Announcement

14.05 – 14.15
Invitation to Montreal 2020

14.15 – 14.50
C110 The dawn of brain computer interfaces
T Oxley (Australia)

14.50 – 15.10
Healey Center Award

15.10 – 15.20
Late breaking news

Poster sessions

THEME 1

Epidemiology and informatics

EPI-01 Applying Mendelian Randomization methods to investigating risk factors and causes for ALS: promises and pitfalls
Armon C

EPI-02 WITHDRAWN

EPI-03 Determining environmental risk factors for ALS using large claims and environmental pollutant databases
Miller C, Arndt T, Russo P, Shukla O, Merrill C, Agnese W, Apple S, Bradley W, Stommel E, Andrew A, Shi X, Butt T, Guetti B, Harrison A

EPI-04 Cyanobacterial exposure and neurodegenerative disease at autopsy
DeWitt J, Butt T, Rueckert J, Buskey A, Martindale R, Andrew A, Shi X, Peipert D, Bradley W, Stommel E

EPI-05 Residential history of volatile solvent exposure and ALS risk: an interdisciplinary GIS-based spatiotemporal approach
Andrew A S, Shi X, Guetti B, Butt T, Piepart D, Pioro E, Stommel E, Bradley W

EPI-06 Incidence of MND/ALS in the Western Cape province of South Africa
Henning F, Heckmann J, Naidu K, Vlok L, Chetty S, Cross H, Marin B

EPI-07 Epidemiological study of MND in India
Sane H, Varghese R, Pradhan R, Paranjape A, Badhe P, Gokulchandran N, Sharma A

EPI-08 WITHDRAWN

EPI-09 MND Register for England, Wales and Northern Ireland
Opie-Martin S, Ossher L, Bredin A, Kulka A, Kelly K, Talbot K, Al-Chalabi A

EPI-10 Machine learning model using insurance claims data to help predict future ALS diagnosis
Grabowsky T, Miller C, Folta T, Shukla O, Merrill C, Agnese W

EPI-11 Googling global burden of motor neuron diseases
Phan T G, Beare R, Srikanth V, Ma H

EPI-12 Assessing the impact of genetic information on the accuracy of machine learning based survival analyses in ALS
Bowles H, Iacoangeli A, Liang J, Al-Khleifat A, Opie-Martin S, Dobson R J, Newhouse S J, Al-Chalabi A

EPI-13 Evidence for generalizability of edaravone efficacy using a novel machine-learning (ML) risk-based analysis tool
Brooks B R, Pioro E P, Schactman M, Beaulieu D, Taylor A A, Keymer M, Agnese W, Perdrizet J, Apple S, Ennist D L

EPI-14 Health utility decline with advancing FT9 stage of ALS: an application to health economic evaluation of hypothetical treatment
Thakore N J, Pioro E P

EPI-15 Functional impairment and survival prediction in ALS patients: a probabilistic model of disease progression
Chio A, Zandonà A, Daberdaku S, Vasta R, Nefussy B, Tavazzi E, Lunetta C, Mora G, Mandrioli J, Grisan E, Gotkine M, Calvo A, Moglia C, Drory V, Di Camillo B

EPI-16 Possibility of needle EMG for prognostic prediction of ALS in the analysis of the Japanese National Registry for intractable and rare diseases
Sato Y, Kanatani Y

EPI-17 The effect of comorbidities in ALS prognosis and disease progression: results from ALS Natural History Consortium
Lunetta C, Arcila-Londono X, Walk D, Vota S, Sherman A, Goslin K, Hayat G, Newman D, Steijlen K, Wymer J, Olney N, Somers M, Yu H, Jones J, Gandhi N, Faulconer K, La T, Tarlarini C, Gerardi F, Macklin E

EPI-18 Longitudinal data collection of combined clinic cohorts for improved understanding of ALS natural history
Lunetta C, Arcila-Londono X, Walk D, Vota S, Sherman A, Goslin K, Hayat G, Newman D, Steijlen K, Wymer J, Olney N, Somers M, Yu H, Jones J, Gandhi N, Faulconer K, La T, Tarlarini C, Gerardi F, Macklin E

EPI-19 Retaining voice identity in ALS/MND patients by new generation Voice-Output Communication Aids (VOCAs)
Chopra R, Sane H

THEME 2

Genetics and genomics

GEN-01 The ALS GAP Program: paving the way for genetic characterization of ALS in the clinic
Roggenbuck J, Doyle C, Lincoln T, Glass J

GEN-02 A clinical tool to determine the probability of a person with ALS having a positive gene test, given their age of onset
Mehta P R, Jones A R, Iacoangeli A, Lewis C M, Morgan S, Pittman A, Morrison K E, Shaw P J, Shaw C E, Al-Chalabi A

GEN-03 Implication of rare variants in causative genes for Charcot-Marie-Tooth disease in patients clinically diagnosed as ALS
Hama Y, Date H, Ishiura H, Mitsui J, Doi K, Yoshimura J, Morishita S, Tsuji S, Mizusawa H, Takahashi Y

GEN-04 Shared genetic architecture between ALS, bipolar disorder and cognitive function
Byrne R P, Doherty M A, Hengeveld J C, Kelly C, van Rheenen W, Veldink J H, Hardiman O, McLaughlin R L

GEN-05 Advantages of Southern blot to overcome repeat-primed PCR limits in the molecular diagnosis a C9ORF72-mutated FTD patient
Chudinova A V, Heitz C, Pattyn A, Thouvenot E, Raoul C, Lumbroso S, Mouzat K

GEN-06 Targeted long-read sequencing of C9orf72 repeat detects repeat length, sequence composition and methylation status in ALS patients
Parker M D, Wyles M, Heath P, Cooper-Knock J, Ashok V, Thornton Z A, Wang D, Kirby J, Shaw P

GEN-07 Investigation of a novel genomic structural variant of NEK1 in ALS
Jiang L, Pytte J, Theunissen F, Flynn L, Fletcher S, Anderton R, Mastaglia F, Rodger J, Harvey A, Needham M, Akkari A

GEN-08 The elucidation of disease mechanisms underlying MND/familial ALS caused by a novel gene mutation
Salman M, Rother A, Topp S, Smith B, Shaw C, de Belleroche J

GEN-09 Exome analysis in 54 autopsied Japanese sporadic ALS patients
Ishihara T, Hatano Y, Tada M, Kakita A, Onodera O

GEN-10 Genetic and functional analysis of the KIF5A variants in Japanese patients with sporadic ALS
Nakamura R, Atsuta N, Tohnai G, Nakatochi M, Hayashi N, Katsuno M, Izumi Y, Taniguchi A, Hattori N, Morita M, Kano O, Kuwabara S, Oda M, Abe K, Mizoguchi K, Kaji R, Sobue G

GEN-11 A novel splicing variant of ANXA11 in Japanese sporadic ALS patients
Hatano Y, Ishihara T, Tada M, Kakita A, Onodera O

GEN-12 ANXA11 Mutations are commonly associated with patients with sporadic ALS of Chinese origin
Zou Z, Feng S-Y, Feng S-M, Huang H-P

GEN-13 Novel mutations in the cargo binding and stalk domains of KIF5A link to patients with ALS
Zou Z, Feng S, Feng S, Huang H-P

GEN-14 Familial flail leg ALS caused by PFN1 mutation
Zou Z-Y, Yu J-T, Chen D-D, Huang H-P

GEN-15 Exploration of genetic architecture in Chinese ALS patients
Zhang K, Shen D, Tai H, Liu S, Sun X, Wang Z, Yang X, Liu Q, Li X, Guan Y, Liu M, Zhang X, Cui L

GEN-16 Mutation analysis of causative genes for ALS in southern China
Wang J L, Li Z, Huang L, Yuan Y C, Li W Z, Ni J, Hu Y T, Shen L, Tang B S

GEN-17 Mutation analysis of the GLT8D1 and ARPP21 genes in ALS patients in mainland China
Wang J, Li W, Liu Z, Sun W, Yuan Y, Hu Y, Ni J, Jiao B, Fang L, Li J, Shen L, Tang B

GEN-18 Genotype characteristics of patients with ALS in eastern China
Zhao H, Niu Q

GEN-19 Screening of the OPTN mutations in Chinese ALS patients
Yang L, Cheng Y, Jia X, Liu X, Liu M, Cui L, Li X

GEN-20 ALS-associated TBK1 variant p.G175S is unable to phosphorylate p62 serine residue 403 and fails to promote NF-κB signalling
Foster A D, Rea S

GEN-21 SQSTM1 variants in familial ALS patients
Yilmaz R, Müller K, Brenner D, Borck G, Volk A E, Hermann A, Meitinger T, Strom T M, Ludolph A C, Andersen P M, Weishaupt J H

GEN-22 Investigating the genetics of ALS in a multi-ethnic Malaysian cohort
Edgar S, Ahmad-Annuar A, Ellis M, Aziz N A A, Goh K-J, Loh E C, Latif L A, Capelle D, Kennerson M L, Shahrizaila N

GEN-23 First de novo SOD1 pathogenic variant in Korean patient with sporadic ALS
Kim Y-E, Oh K-W, Park J, Ki C-S, Kim S H

GEN-24 Identity by descent analysis of Australian SOD1 mutation carriers links sporadic ALS cases to ALS families and uncovers founder events
Henden L, Twine N A, Szul P, McCann E P, Nicholson G A, Rowe D B, Kiernan M, Bauer D C, Blair I P, Williams K L

GEN-25 Genetic variation in known ALS genes is prevalent among Australian sporadic ALS cases
McCann E P, Fifita J A, Henden L, Grima N, Twine N A, Bauer D C, Kiernan M, Nicholson G A, Rowe D B, Williams K L, Blair I P

GEN-26 Frequency and methylation status of active L1s in ALS
Pfaff A L, Lopez A I, Bubb V J, Iacangeli A, Smith B, Schumann G G, Koks S, Al-Chalabi A, Quinn J P

GEN-27 Genetic origin of ALS: a somatic or germinal process?
Borrego-Hernández D, Rodal-González I, Martín-Hondarza A, Pastor-López A B, García-Salamero G, González-Álvarez V, Lucas-Gómez B, Cordero-Vázquez P, Martín-Casanueva M A, Esteban-Pérez J, Rábano A, García-Redondo A

GEN-28 Using Next Generation Sequencing and functional analysis to discover novel ALS genes and variants
Fat S C M, Fifita J A, McCann E P, Yang S, Williams K, Twine N, Bauer D, Rowe D, Nicholson G A, Blair I

GEN-29 Partitioning the genetic architecture of ALS
Broce I J, Nillo R M, Fan C C, Olney N T, Lomen-Hoerth C, Finkbeiner S, Atassi N, Cudkowics M E, Paganoni S, Yokoyama J S, van Rheenen W, Veldink J H, Al-Chalabi A, Andreassen O A, Dale A M, Seeley W, Sugrue L, Ofori-Kuragu A, Miller B L, Desikan R S

GEN-30 Molecular basis of upper motor neuron degeneration
Ozdinler H

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In vitro experimental models

IVT-01 A functional pipeline for the validation of novel ALS candidate genes
Yang S, Wu S, Fifita J, McCann E, Fat S C M, Galper J, Freckleton S, Zhang K Y, Blair I P

IVT-02 High-content screening platform to screen potential Rab1 therapeutic candidates to treat MND
Mehta P, Parakh S, Vidal M, Jagaraj S J, Shahheydari H, Abbott B, Laird A, Atkin J

IVT-03 ALS2 along with a novel ALS2 interacting protein rab30 regulates morphological integrity and functions of the golgi apparatus
Otomo A, Onodera W, Murakoshi S, Matsui K, Sato K, Mitsui S, Ono S, Fukuda M, Hadano S

IVT-04 Sorting cells with ALS-associated protein aggregation phenotypes for genome-wide CRISPR screening
Gil R S, Venturato J, Hedl T, Zhao Q, Edson J, Walker A K

IVT-05 Development and validation of Cas9 neuroblastoma stable cell lines for CRISPR knockout and activation studies of the mechanisms involved in MND pathogenesis
Venturato J, Gil R S, Walker A K

IVT-06 CRISPR-Cas9 mediated introduction of the TDP-43 A382T mutation produces iPSC-derived motor neurons with ALS-like pathology
Tracey T J, Ovchinnikov D A, Wolvetang E J, Ngo S T

IVT-07 Optimisation of a method for the direct reprogramming of patient fibroblasts into lower motor neurons
Tracey T J, Abernathy T G, Steyn F J, McCombe P A, Henderson R D, Ovchinnikov D A, Yoo A S, Wolvetang E J, Ngo S T

IVT-08 The impact of Ryanodine receptor on organelle function in iPSC-derived ALS motor neurons
Vlad B, Tadic V, Gaur N, Stubendorff B, Witte O W, Hermann A, Grosskreutz J

IVT-09 Pathogenic and functional effects of the F115C Matrin 3 mutation in motor neurons derived from patient iPSCs
Medina D X, Dominick M, Bowser R

IVT-10 Mutant protein aggregates, mitochondrial impairment, and calcium dysregulation in motor neurons derived from induced pluripotent stem cell lines of Chinese family ALS patients carrying SOD1 mutations
Deng M, Liu W

IVT-11 MSC-NTF differentiation increases the neurotrophic effects of MSC cells: live imaging analysis
Semo J, Kaspi H, Abramov N, Lebovits C, Gothelf Y, Aricha R, Kern R

IVT-12 Elucidating mechanisms of TDP-43 toxicity in embryonic stem cell derived motor neurons
Carroll E, Gordon D, Candalija A, Talbot K

IVT-13 Concurrent hypomorphic cytoplasmic dynein and reduced TBK1 function exacerbate formation of stress granules and p62 protein aggregates and compromise their autophagic clearance
Gourabi M H, Simoes F A, Hafezparast M

IVT-14 TDP-43 mutation affects stress granule assembly and disassembly in NSC34 motor neurons
Ding Q, Ng D, Hilliard M A, Wolvetang E, Noakes P G

IVT-15 TIA1 interacts with mutant SOD1 and affects stress granule dynamics in ALS
Jeon G S, Yang J W, Lee K-W, Sung J-J

IVT-16 Neuropeptide Y reduces cell death in vitro via a cleaved caspase 3 dependent mechanism in SOD1G93A model of ALS
Clark C M, Clark R M, Dickson T

IVT-17 Promotion of the maturation of SOD1-FALS mutants using small molecules
Shephard V, McAlary L, Wright G SA, Yerbury J J

IVT-18 Layer V Pyramidal Neurons with synaptic hyper-excitability show altered TrkB receptor signaling in the SOD1G93A mouse model of ALS
Pradhan J, Nakes P G, Bellingham M C

IVT-19 Pharmacological autophagy induction causes reductions in the levels of FUSP525L and amelioration of SOD1A4V aggregation in cell culture ALS models
Lambert-Smith I A, Tym M, Luu L, Watchon M, Yerbury J J, Don E K, Laird A S

IVT-20 Increased levels of a key UPS protein reduce mutant SOD1 toxicity but have no effect on mutant SOD1 aggregation
Lambert-Smith I A, Farrawell N E, McAlary L, Vine K L, Ecroyd H, Saunders D N, Yerbury J J

IVT-21 Ubiquitin homeostasis is disrupted in ALS
Farrawell N E, Lambert-Smith I A, Vine K L, Saunders D N, Yerbury J J

IVT-22 Cyclin F interacts with autophagy protein sequestosome-1/p62 elucidating a novel molecular mechanism
Davidson J M, Cheng F, Rayner S L, Chung R S, Lee A

IVT-23 EPI-589, a novel redox-active protectant against oxidative cell injury and poly glycine-alanine aggregation in cellular models of ALS-related pathophysiology
Motodate R, Matsumoto Y, Nashida T, Goto N, Yamana Y, Miyoshi K, Kondo Y, Tanaka T, Isobe Y, Yamanaka M, Trimmer J, Ishiyama T

IVT-24 Neuronal toxicity and mitochondrial protection in ALS-related Sigma-1 receptor missense mutation
Fukunaga K, Fukunaga R, Shinoda Y

IVT-25 A microdevice-based method for quantifying endolysosomal and mitochondrial axonal transport in neruon derived from a mouse model of ALS
Otomo A, Kushida T, Ishida T, Araki R, Sato K, Mitsui S, Ono S, Kimura H, Hadano S

IVT-26 Single copy expression of mutant TDP-43 increases microglial reactivity and motor neuron vulnerability to inflammatory stimuli
Clark J, Kelfkens M, Geist E, Gray E, Gordon D, Talbot K

IVT-27 Inflammatory response to TDP-43 knockdown in human leptomeningeal tissue
Naidoo S, Scotter E L, Dragunow M

IVT-28 Impaired NHEJ repair in ALS is associated with TDP-43 mutations
Konopka A, Whelan D R, Perri E, Shahheydari H, Jamali S, Toth R P, Parakh S, Mehta P, Vidal M, Ragagnin A MG, Khizhnyak I, Jagaraj C J, Shadfar S, Bel T D M, Walker A, Atkin J D

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IVT-30 SQSTM1/p62 expression induces TDP-43 cytoplasmic mislocalisation and cleavage
Foster A, Cluning C, Lee A, Rea S L

IVT-31 Exosomes secreted by diseased ALS cerebral cortex include messages to modulate disease progression
Ozdinler H, Gautam M, Xie E, Brent J, Thaxton S

IVT-32 ALS-associated mutations in the TDP-43 low-complexity domain have variable effects on its liquid-liquid phase separation properties
McAlary L, Heydari T, Hoggarth J, Peng X, Cashman N R, Plotkin S S

IVT-33 Using fluorescence microscopy techniques to structurally characterise TDP-43 inclusions present in a mammalian cell model
Matharu1 N S, Hanspal1 M A, Ng1 J S W, Wilson M R, Yerbury J J, Kaminski C F, Dobson C M, Kaminski-Schierle G S, Kumita1 J R

IVT-34 Characterisation of the role of Annexin A11 in ALS biology using two complementary in vitro models
Patel R, Glennon E, Vance C, Smith B

IVT-35 ANXA11 mutations in ALS cause dysregulation of calcium homeostasis and stress
Lim S M, Nahm M, Kim Y-E, Park J, Noh M-Y, Lee S, Oh K-W, Kim S H

IVT-36 Neuronal expression and function of C-type lectin domain family 4 Member C, CLEC4C
Nahm M, Lim S M, Noh M-Y, Kim Y-E, Oh K-W, Kim S H

IVT-37 The TGF-beta induced muscle fibrosis and wasting in myoblast as in ALS mouse might be inhibited by pirfenidone
Kwon Y N, Lee D Y, Baek H, Min Y G, Choi S-J, Ban J-J, Jeon G S, Hong Y-H, Sung J-J, Lee K-W

IVT-38 In vitro measurement of molecular vibrational spectra of TDP25-based protein aggregates in culture cells
Nagashima Y, Iwata A, Toda T

IVT-39 A novel mutation of endoplasmic reticulum protein PDZD8 in the progression of ALS
Li C, Chen Y, Chen X, Wei Q, Cao B, Shang H

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In vivo experimental models

IVV-01 Use of Zebrafish for the functional validation of ALS-associated genetic variants
Chudinova A V, Rossel M, Vergunst A, Le-Masson G, Camu W, Raoul C, Lumbroso S, Mouzat K

IVV-02 In vivo analysis of variant pathogenicity for the validation of novel MND linked genes
Hogan A, Fifita J, Yang S, McCann E, Grima N, Blair I P

IVV-03 An inducible Zebrafish model of sporadic neurodegenerative disease
Don E K, Hortle E, Hogan A L, Formella I, Morsch M, Lucus C W, Winnick C G, Scherer N, Vidal-Itriago A, Chow S, Chung R S, Nicholson G A, Cole N J, Laird A S

IVV-04 Investigating synaptic dysfunction in a C9orf72 loss of function Zebrafish model
Butti Z, Giacomotto J, Patten K

IVV-05 Heterozygous TBK1 deletion in a TARDBP mutant mouse model
Sieverding K, Ulmer J, Bruno C, Satoh T, Akira S, Tsao W, Wong P, Ludolph A C, Brenner D, Weishaupt J H

IVV-06 Characterization of mice with heterozygous TBK1 deletion
Bruno C, Sieverding K, Freischmidt A, Brenner D, Ludolph A C, Weishaupt J H

IVV-07 TDP-43 mutant lacking its C-terminal domain induces age-dependent motor dysfunction in mice
Watanabe S, Nishino K, Murata Y, Oiwa K, Yamanaka K

IVV-08 Elevated expression of the DNA/RNA-binding protein FUS in astrocytes induces reactivity and spinal motor neuron death in vivo
McAvoy K, Jensen B K, Heinsinger N, Mayer K, Westergard T, Lepore A C, Haeusler A, Trotti D, Pasinelli P

IVV-09 Establishing a novel mouse model of sporadic ALS using a chemogenetic approach
Haidar M, Cuic B, Rytova V, Luikinga S, Turner B

IVV-10 Hyperexcitable layer 5 pyramidal neurons in a model of cortical TDP-43 mislocalisation
Dyer M S, Lewis K E, Dickson T C, Woodhouse A, Blizzard C A

IVV-11 Beneficial effects of EPI-589, a novel redox-active protectant against oxidative stress, on motor function, spinal motor neuron pathology and biomarkers of oxidative stress and neurodegeneration in wobbler mouse MND
Nashida T, Matsumoto Y, Motodate R, Goto N, Yamana Y, Nakada S, Kitaichi M, Fujii Y, Tani N, Matsushita H, Yamanaka M, Ishiyama T

IVV-12 Co-administration of EPI-589, a novel redox-active protectant against oxidative stress, and riluzole remarkably enhanced the efficacy of either drug for motor function deterioration in wobbler mouse MND
Matsumoto Y, Nashida T, Motodate R, Goto N, Yamana Y, Fujii Y, Tani N, Matsushita H, Yamanaka M, Ishiyama T

IVV-13 Investigating the role of oxidative stress in spinal motor neurons in a zebrafish model of ALS
Scherer N M, Formella I, Vidal-Itriago A, Don E K, Svahn A J, Graeber M B, Chung R S, Morsch M

IVV-14 The pathogenesis of chlorovirus infection in SOD1G93A transgenic mice and clinical implications for ALS
Pattee G L, Petro T M, Dunnigan D D, Agarkova I, Van Etten J L

IVV-15 A protective role for complement C3aR activation in ALS
Lee J D, McDonald T S, Woodruff T M

IVV-16 Microglia specific and disease associated protein signature in ALS
Barreto-Núñez R, Béland L-C, Boutej H, Barbeito L, Kriz J

IVV-17 In vivo study of microglial-mediated clearance of disease-related TDP-43 aggregates
Vidal-Itriago A, Svahn A J, Scherer N M, Radford R A, Don E K, Chung R, Graeber M, Morsch M

IVV-18 Oral glutathione administration rescues neurons by reduced neuroinflammation in Alzheimer's mice
Fukunaga R,Izumi H, Sato K, Fukunaga K

IVV-19 Motor neuron morphogenesis is controlled by phosphoinositol signaling to the actin cytoskeleton
Buttigieg D, Jacquier A, Tian Z, Blanchard S, Barad M, Gentien D, De La Grange P, Medina I, Bohl D, Erb M, Santini J, Haase G

IVV-20 Enhancing glycosphingolipid metabolism improves motor function in mutant TDP-43 mice
Luikinga S J, Henriques A, Ngo S T, Loeffler J P, Spedding M, Turner B J

IVV-21 In vivo dampening the metabotropic glutamate receptor 5 activity normalizes the reactive phenotype of spinal cord astrocytes isolated from late-symptomatic SOD1G93A mice
Bonifacino T, Milanese M, Torazza C, Provenzano F, Ravera S, Usai C, Bonanno G

IVV-22 Defective glucose metabolism in the brain and spinal cord of the SOD1G93A mouse model of MND
Tefera T W, Bartlett K, Tran S S, Hodson M P, Ngo S T, Borges K

IVV-23 Impaired glucose handling contributes to skeletal muscle pathology in the SOD1G93A mouse model of MND
McDonald T S, Woodruff T M, Lee J D

IVV-24 Resistant neuromuscular junction of extraocular muscle in ALS: a comparative analysis with vulnerable muscle in ALS mouse model
Provost F, Nadeau R, Arbour D, Gauthier M-S, Lavallée-Adam M, Coulombe B, Robitaille R

IVV-25 Transmission of human mutant SOD1 across the synapse involves exocytosis
Cashman N R

IVV-26 Transmissibility of SOD1 prion strains between mice expressing different mutant human SOD1s
Brannstrom T, Bidhendi E E, Anderson P M, Marklund S L

IVV-27 Identifying novel roles for Protein Disulfide Isomerase (PDI) in ALS
Shadfar S, Shahheydari H, Parakh S, Laird A S, Atkin J

IVV-28 BDNF-regulation of in vivo axonal transport is impaired in SOD1G93A mice
Tosolini A P, Sleigh J N, Surana S, Cahalan S D, Negro S, Schiavo G

IVV-29 WITHDRAWN

IVV-30 Interplay of necroptotic and ferroptotic motor neuron death in ALS
Wang T, Perera N, Murphy J, Turner B

IVV-31 Comparison study of the anatomical redistribution of essential metals in the embryonic and adult CNS of SOD1 overexpressing mice
Kysenius K, Hilton J B, Paul B, Hare D J, Crouch P J

IVV-32 Does mislocalised TDP-43 in excitatory neurons of the motor cortex cause ALS-like pathology in the spinal cord?
Reale L A, Lewis K EA, Dyer M S, Handley E E, Dickson T C, Blizzard C A

IVV-33 Investigating the role of TDP-43 recruitment to stress granules in a mouse model of ALS/FTD
Wardley G FB

IVV-34 Modeling gene-toxicant interactions in ALS using regulatory elements as novel risk factors
Morrice J R, Smith M, Hancock R EW, Gregory-Evans C Y, Shaw C A

IVV-35 Investigation of HSF1 gene therapy in a mouse model of ALS/FTD
McLoughlin C J

IVV-36 Enhanced survival of a transplanted MSC sheet on the mouse cerebrum
Honda N, Watanabe Y, Nakanishi M, Tokuoka Y, Terashima T, Katagi M, Hanajima R

IVV-37 Network aberrations in iTDP-43A315T mouse model of ALS/FTD
van Hummel A, Ittner L M, Bi M, Chieng B, Müller J, Ke Y D

IVV-38 Investigating NPY receptors in SOD1G93A transgenic mice and human ALS tissue - pathogenic and therapeutic relevance of the endogenous Neuropeptide Y system
Clark R M, J A Hoyle, Clark C M, Lewis K EA, Blizzard CA, Dickson T C

IVV-39 Role of C9orf72 in inflammation and neurodegeneration
McCauley M E, O'Rourke J, Bell S, Valencia V, Markman J, Arditi M, Ho R, Yanez A, Jefferies C, Baloh R H

IVV-40 Gain of toxicity from ALS/FTD-linked repeat expansions in C9ORF72 mouse model
Arias N, Mueller S, Shaw C

IVV-41 Converging pathological mechanisms in ALS-FTD: RNA dysregulation in a endosomal dysfunction model of ALS-FTD
Fort L, Sweeney S T

IVV-42 tRNA modification defects in mouse models of ALS
Hogg M C, Richter F M, Woods I, Helm M, Prehn JHM

IVV-43 Longitudinal transcriptomic analysis of altered pathways in a CHMP2Bintron5-based model of ALS-FTD
Waegaert R, Dirrig-Grosch S, Keime C, Henriques A, Loeffler J-P, René F

THEME 5

Human cell biology and pathology

HCB-01 ALS: a complex disease needs a validated early diagnostic tool
Gieseler A, Hillert R, Krusche A, Zacher K-H

HCB-02 A large-scale library of patient derived iPSC lines to accelerate ALS research
Bye C, Daniszewski M, Qian E, Lim K, Liang H, Needham M, Fletcher S, Mathers S, Pebay A, Hewitt A, Turner B

HCB-03 Developing cell lines from distinct ALS/MND disease presentations: understanding disease heterogeneity
Rosenfeld J, Shi Y, Hung S-T, Rocha G, Lin S, Linares G, Staats K A, Seah C, Wang Y, Chickering M, Lai J, Sagare A P, Zlokovic B V, Ichida J K

HCB-04 Modelling cortical motor neuron pathology in induced pluripotent stem cell derived neurons from patients with ALS
Chen Z S, Dafinca R, Patani R, Talbot K

HCB-05 Vesicle trafficking pathways are dysregulated in C9orf72 iPSC-derived motor neurons
Candalija A, Vahsen B, Barbagallo P, Scaber J, Dafinca R, Webber C, Haase G, Talbot K

HCB-06 Expression of poly(GA) and poly(PR) in iPSC-derived motor neurons induces ALS-related phenotypes via different pathways
Barbagallo P, Candalija A, Dafinca R, Talbot K

HCB-07 Novel method to detect DNA damage in ALS
Brocardo M G, Rizos H, Atkin J

HCB-08 C9orf72 is an actin binding protein involved in regulation of actin dynamics
Jagaraj C J, Sundramoorthy V, Walker A K, Atkin J D

HCB-09 Nucleocytoplasmic transport defects are induced by mutant cyclin F in ALS/FTD
Atkin J D, Ragagnin A MG, Shadfar S, Vidal M, Lorenc F, Sundaramoorthy V

HCB-10 Investigating changes in neuronal excitability using iPSC-derived motor neurons from ALS patients
Do-Ha D, Sanz Munoz S, Stevens C H, Cabral-da-Silva M C, Bax M, Balez R, Kalajdzic P, Lisowski L, Nicholson G, Yang S, Blair I, Engel M, Buskila Y, Ooi L

HCB-11 Sequestration of RNA helicase DHX30 from mitochondrion is linked to mitochondrial dysfunction in ALS-FUS
Hikiami R, Minamiyama S, Asada M, Wada H, Shodai A, Morimura S, Ayaki T, Takahashi R, Urushitani M

HCB-12 Elucidating axonal pathology of fused in sarcoma (FUS)-mutant ALS motor neurons using microfluidic devices
Suzuki N, Akiyama T, Ishikawa M, Kawada J, Fujii T, Mitsuzawa S, Ikeda K, Funayama Ryo, Nakayama K, Fujishima F, Mitsuhashi H, Warita H, Okano H, Aoki M

HCB-13 The pathogenic role of a new FUS isoform in ALS
Vidal M, Ragagnin A MG, Lee A, Heng B, Sundaramoorthy V, Chung R, Guillemin G J, Atkin J D

HCB-14 Assessing TDP-43 and RNA dynamics: patient induced pluripotent stem cell derived motor neurons as a tool for investigating Annexin A11 associated ALS
Hedges E C

HCB-15 A multicentric approach to monocyte alterations in ALS
Brockmann S J, Ribon M, Masrori P, Bhatia D, Brenner D, Hesters A, Ludolph A C, Danzer K M, Salachas F, Van Damme P, Boillée S, Weishaupt J H

HCB-16 Mutations in the glycosyltransferase domain of GLT8D1 are associated with familial ALS
Moll T A, Cooper-Knock J, Hautbergue G, Ramesh T, Higginbottom A, Castelli L, Kirby J, Shaw P

HCB-17 Premature polyadenylation and loss of the neuronal stathmin-2 inhibits axonal regeneration in TDP-43-dependent neurodegeneration
Melamed Z, Lopez-Erauskin J, Baughn M, Zhang O, Drenner K, Sun Y, Freyermuth F, Wu D, Bennett F, Rigo F, Da Cruz S, Ravits J, Cleveland D, Lagier-Tourenne , C

HCB-18 Phosphorylation state of ALS2/ALSIN alters its intracellular localization and endosome dynamics
Shimakura K, Sato K, Mitsui S, Ono S, Otomo A, Hadano S

HCB-19 Genetic and immunopathological analysis of CHCHD10 in Australian ALS and FTD
Yang S, McCann E P, Fifita J A, Grima N, Galper J, Mehta P, Freckleton S, Zhang K Y, Hogan A, Chan S, Henden L, Williams K, Twine N, Bauer D, Kwok J, Halliday G, Kiernan M, Rowe D B, Nicholson G A, Walker A K, Blair I P

HCB-20 WITHDRAWN

HCB-21 Predicting disease-specific spinal motor neurons and glia in sporadic ALS
Song F, Dachet F, Liu J, Ravits J

HCB-22 Elemental and structural characterisation of SOD1 aggregates in the human ALS spinal cord
Genoud S, Jones M WM, Hare D J, Double K L

HCB-23 Abnormal accumulation of citrullinated proteins in ALS/PDC of the Kii peninsula of Japan
Kokubo Y, Morimoto S, Sasaki R, Kuzuhara S, Ishigami A

HCB-24 RNA trafficking is disrupted in oligodendrocytes in the motor cortex white matter in ALS patients
Barton S K, Gregory J M, McDade K, Turner B J, Smith C, Chandran S

HCB-25 CNS-derived extracellular vesicles from superoxide dismutase 1 (SOD1) G93A ALS mice originate from astrocytes and neurons and carry misfolded SOD1
Silverman J M, McAlary L, Mackenzie I R, Foster L F, Cashman N R

HCB-26 Non-genetic origins of SOD1 protein misfolding in post mortem familial and sporadic ALS
Trist B G, Cottam V, Genoud S, Roudeau S, Fifita J A, Carmona A, Blair I P, Ortega R, Hare D, Double K L

HCB-27 Copper malfunction is a pervasive feature of the sporadic MND spinal cord
Hilton J B, Kysenius K J, Liddell J R, Rautengarten C, Mercer S W, McLean C A, Hare D J, Roberts B R, White A R, Crouch P J

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Tissue biomarkers

BIO-01 Is the problem within the gut instead of the brain? Impairment of dietary glutamate metabolism identified in patients with ALS
Garnaas K R, Kittelsrud J, Behnke M

BIO-02 Vitamin levels in patients with ALS in central south China
Wang J, Sun W, Liu Z, Yuan Y, Ni J, Li W, Hu Y, Jiao B, Fang L, Li J, Shen L, Tang B

BIO-03 The vitamin D activator, CYP27B1, is a novel muscle biomarker of ALS disease progression
Si Y, Kazamel M, Kwon Y, Lee I, Bamman M, Wiggins D, Zhou S, King P H

BIO-04 Longitudinal analysis of CSF biomarkers for ALS
Vu L, An J, Garcia-Mansfield K, David-Dirgo V, Sharma R, Pirrotte P, Bowser R

BIO-05 Phosphoneurofilament heavy chain and IgG N-glycosylation as cerebrospinal fluid biomarkers for ALS
Costa J, Streich L, Pinto S, Laborinho-Pronto A, Nimtz M, Conradt H S, de Carvalho M

BIO-06 A panel of three ratios of four molecules as cerebrospinal fluid biomarker for ALS in a Brazilian cohort
Maximino J R, Busser F D, Jorge F MH, Gomes H R, Fortini I, Palmisano G, Chadi G

BIO-07 Significance of TDP-43, NfL, and tau in plasma and CSF as diagnostic and prognostic biomarkers of ALS
Ohmichi T, Kasai T, Tatebe H, Kojima Y, Noto Y, Tsuji Y, Shinomoto M, Mizuno T, Tokuda T

BIO-08 Biomarkers in cerebrospinal fluid for diagnosis and prognosis in ALS
Rosen H, Constantinescu R, Axelsson M, Mitre B, Nilsson G, Zetterberg H

BIO-09 Significant out-of-sample classification from methylome-wide association study of ALS
Nabais M F

BIO-10 Characterising the role of SARM1 in ALS axon degeneration
Perry S E, Atkinson R A K, Collins J M, King A E

BIO-11 Biomarker analysis in oral levosimendan phase 2 clinical trial LEVALS
Dickens A M, Sarapohja T, Serkkola E, Garratt C, Holmström K M, on behalf of the LEVALS study group

BIO-12 Chitinases as markers of neuroinflammation in ALS
Gaur N, Perner C, Perner F, Vlad B, Steinbach R, Heidel F, Duduskar S, Huss E, Metzner K, Witte O W, Prell T, Grosskreutz J

BIO-13 C-Reactive protein and disease aggressiveness and progression in ALS: retrospective application of the D50 model
Gaur N, Vlad B, Witte O W, Prell T, Grosskreutz J

BIO-14 Exploration of N-Alkylated Carbazole Translocator Protein (TSPO) ligands for detection of glial activation
Cheng H W A, Sokias R, Werry E L, Ittner L M, Reekie T A, Kassiou M

BIO-15 Increased Interleukin-6 levels in the astrocyte-derived exosomes of sporadic ALS patients
Chen Y, Xia K, Fan D

BIO-16 Cardiac troponins as biomarkers in ALS
Castro-Gomez S, Mirandola S R, Radermacher B, Binder J, Heneka M T, Weydt P

BIO-17 WITHDRAWN

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Pre-clinical therapeutic strategies

TST-01 The potential of neurofilaments analysis using dry-blood and plasma spots
Lombardi V, Carassiti D, Giovannoni G, Lu C-H, Adiutori R, Malaspina A

TST-02 UCHL1 is necessary and sufficient for maintaining cytoarchitectural integrity of upper motor neurons
Ozdinler H, Genc B, Jara J, Kocak N, Zhu Y

TST-03 Incorporation of upper motor neurons in drug discovery efforts
Ozdinler H

TST-04 Ambroxol hydrochloride improves motor functions and extend survival in a mouse model of familial ALS
Bouscary A, Quessada C, Mosbach A, Callizot N, Spedding M, Loeffler J-P, Henriques A

TST-05 Investigating the therapeutic potential of miR-23a inhibition in TDP-43ΔNLS ALS mice
Tsitkanou S, Foletta V, Della Gatta P, Gerlinger Romero F, Wallace M, Walker A, Russell A

TST-06 Targeting ATXN2 with artificial microRNA as gene therapy for sporadic ALS
Freckleton S E, Lee Y, Shaw C E

TST-07 Investigating antisense oligonucleotide therapeutics for ALS
Mejzini R, Flynn L L, Fletcher S, Wilton S D, Akkari A

TST-08 Pre-clinical development of a genetic therapy for SOD1 ALS
Flynn L, Tomas D, Barton S, Pitout I L, Swanson T, Fletcher S, Metz C, Wilton S D, Turner B J, Akkari A

TST-09 Antisense oligonucleotide modulation of selected RNA-binding proteins to reduce the severity of SMA
Pitout I L, Flynn L L, Fletcher S, Wilton S D

TST-10 WITHDRAWN

TST-11 Cu^{II}(ATSM) potently inhibits neuronal ferroptosis: implications for ALS pathogenesis
Bush A I, Southon A, Crouch P, Donnelly P, Barnham K

TST-12 Ferroptotic stress induces neurotoxic astrocyte activation in ALS: A potential therapeutic target for CuATSM
Liddell J R, Hilton J B, Kysenius K, Mercer S, McLean C A, Donnelly P S, Szostak K, Lam L, Roberts B R, Hare D J, White A R, Bush A I, Crouch P J

TST-13 A novel cell transplantation therapy for familial ALS using oligodendrocyte precursor cells expressing scFv specific for misfolded SOD1
Minamiyama S, Sakai M, Yamaguchi Y, Hikiami R, Tamaki Y, Shodai A, Makino A, Maki T, Tomonaga K, Takahashi R, Urushitani M

TST-14 The identification of scFv biomolecules that bind to TDP-43 and prevent its induced aggregation as a potential therapy for ALS
Hergesheimer R C, Chami A, Vourc'h P, Andres C, Corcia P, Martineau P, Reis de Assis D, Lanznaster D, Blasco H

TST-15 Therapeutic potential of the Bornavirus X protein and X-derived peptide in ALS
Chevallier S, Leger C, Cabelguen J-M, Delignat Lavaud B, Irubetagoyena P, Klonjkowski B, Gonzalez-Dunia D, Szelechowski M, Le Masson G

TST-16 The homeoprotein transcription factor ENGRAILED 1 modulates motor neuron physiology and survival
Vargas Abonce S E, Leboeuf M, Prochiantz A, Moya K L

TST-17 Targeting ALS cortical excitability dysfunction through nasal delivery of neuropeptide Y
Lewis K EA, Clark R M, Chuckowree J A, Hoyle J A, Blizzard C A, Dickson T C

TST-18 Development of autophagy-inducing peptides as a potential therapy for MND
Amin A, Perrera N, Turner B, Shabanpoor F

TST-19 Developing new cell models and approaches to study the role of TDP-43 and autophagy in MND
Keating S S J, San Gil R, Walker A K

TST-20 WITHDRAWN

TST-21 A systematic review of the role of stem cells in pre-clinical models of ALS/MND
Sane H, Pradhan R, Paranjape A, Kulkarni P, Varghese R, Badhe P, Gokulchandran N, Sharma A

TST-22 Degeneration of ALS mouse neuromuscular junctions by a loss of synapse organizer and a treatment using human mesenchymal stem cells

Badawi Y, Matsuda T, Tungtur S, Tanaka T, Soder R, Silva K, Shigemoto K, Yoshida T, Barohn R, Nishimune H

TST-23 Combined bone marrow transplantation therapy of MNCs and growth factor expressing-MSCs for ALS
Terashima T, Kobashi S, Watanabe Y, Nakanishi M, Honda N, Katagi M, Nakae Y, Ohashi N, Urushitani M, Kojima H

TST-24 Immunogenes for targeted neurotrophic factor gene delivery to motor neurons in vivo
Rogers M-L, Subramaniam C, Haidar M, Turner B

TST-25 Subcutaneous infusion of next generation neurotrophic factor MANF delays disease onset and increases survival in a SOD1 murine model of ALS
Beckett L, Voutilainen M H, Saarma M

TST-26 New strategy for blood-brain barrier crossing and brain disease therapy
Shi B

TST-27 Pre-clinical test of a gene therapy approach for familial ALS with SOD1 mutations
Marais T, Cohen-Tannoudji M, Astord S, Biferi M-G

TST-28 Viral strategies for pre-clinical testing in the TDP-43ΔNLS mouse model of MND
Brown-Wright H, Chui K, Walker A

TST-29 Treatment with HDAC inhibitors is protective for a transgenic zebrafish model of neurodegenerative disease
Watchon M, Luu L, Lee A, Lambert-Smith I, Tym M, Don E K, Yuan K, Suddull H, De Luca A, Chung R, Nicholson G A, Laird A S

TST-30 Restoration of histone acetylation ameliorates disease and metabolic abnormalities in a FUS mouse model of ALS
Rossaert E, Pollari E, Jaspers T, Van Helleputte L, Jarpe M, Van Damme P, De Bock K, Moisse M, Van Den Bosch L

TST-31 Understanding the molecular mechanism and finding a therapeutic solution: Structural studies of TDP-43 and Copper-Zinc Superoxide Dismutase
Watanabe T, Wright G, Antonyuk S, Chantadul V, Amporndanai K, O'Neil P, Hasnain S

TST-32 Engineering and enhancing the therapeutic potential of intrabodies targeting pTDP-43
Fernandes A, Shaw C

TST-33 Targeting of the regulatory balance between b-oxidation and glycolysis improves outcomes in the SOD1G86R mouse model of ALS
Quessada C, Bouscary A, Ferri A, Valle C, Ngo S T, Loeffler J-P, Rene F

TST-34 Pharmacological modulation of hypermetabolism: a promising therapeutic strategy in ALS
Valle C, Scaricamazza S, Salvatori I, Giacovazzo G, Proietti D, Ciriminna G, Renè F, Loeffler J-P, Steyn F J, Ngo S T, Madaro L, Coccurello R, Ferraro E, Ferri A

ST-35 Redox-enhancing nanocatalysis improves motor neuron survival in vitro and SOD1 mouse motor function and survival in vivo
Ho K S, Zhang Z, Richard J-P, Hotchkin M T, Lee W, Mortenson P, Steinmetz L, Taga A, Merzliakov M, Dorfman A R, Maragakis N J, Mortenson M G

TST-36 Arimoclomol is neuroprotective and ameliorates both ALS and FTD pathology in mutant VCP mice and patient iPSC motor neurons
Ahmed M, Harley J, Spicer C, Patani R, Greensmith L

TST-37 Ca2+-activated K+ channels modulate microglia affecting motor neuron survival in hSOD1G93A mice
Cocozza G, D'Alessandro G, Garofalo S, Limatola C

TST-38 CD34+ microglia precursors as therapeutic targets in ALS
Kovacs M, Trias E, King P H, Si Y, Kwon Y, Beckman J S, Ibarburu S, Hermine O, Barbeito L

TST-39 Post-paralysis treatment with the synthetic immunomodulator EOLO4 abrogates neuroinflammation and prolongs survival in a model of inherited ALS
Ibarburu S, Trias E, Ingold M, Rodriguez-Duarte J, Galliussi G, López V, Kovacs M, Varela V, Batthyány C, Barbeito L

TST-40 Identification of cellular targets of masitinib along the CNS motor pathways in ALS
Trias E, King P H, Si Y, Kwon Y, Kovacs M, Ibarburu S, Beckman J S, Hermine O, Barbeito L

TST-41 AI-led drug discovery identifies nilotinib as a lead compound for ALS
Markus N, Stopford M, Myszczynska M, Richardson P, Rackham M, Mead R, Ferraiuolo L

TST-42 Combination of acamprosate and baclofen: a potential new therapy for ALS
Boussicault L, Laffaire J, Schmitt P, Rinaudo P, Callizot N, Cholet N, Nabirotchkin S, Hajj R, Cohen D

TST-43 Mechanism of action of the cardiovascular drug Levosimendan in the management of ALS
Holmström K M, Pollesello P, Garratt C

THEME 8

Clinical imaging and electrophysiology

IMG-01 The spectrum of involuntary movements in patients with MND: a cross-sectional study
Vogelnik K, Alfonso R P, Koritnik B, Klavžar P, Leonardis L, Grošelj L D, Zidar J, Kojović M

IMG-02 Impact of stimulus duration on detecting enlarged motor units in the compound muscle action potential scan
Sleutjes B THM, Ruisch J, Goedee H S, van den Berg L H, Franssen H

IMG-03 Reassessment of split-leg signs in ALS: differential involvement of the extensor digitorum brevis and abductor hallucis muscles
Wang Z-L, Cui L, Liu M, Zhang K, Liu S, Ding Q, Hu Y

IMG-04 Split-hand index for ALS: an F-wave study
Wang Z-L, Cui L, Liu M, Zhang K, Liu S, Ding Q, Hu Y

IMG-05 The split hand sign in spinal and bulbar muscular atrophy
Shibuya K, Misawa S, Sekiguchi Y, Beppu M, Amino H, Tsuneyama A, Suzuki Y-I, Suichi T, Nakamura K, Kuwabara S

IMG-06 Split finger syndrome in ALS
Sonoo M, Takahashi K

IMG-07 Relationship between EMG-detected fasciculation potentials and ultrasound-detected fasciculations in ALS: a prospective cohort study
Bokuda K, Shimizu T, Morishima R, Kimura H, Kawata A, Nakayama Y, Isozaki E

IMG-08 Fasciculations demonstrate daytime consistency in ALS
Bashford J, Masood U, Wickham A, Iniesta R, Drakakis M, Boutelle M, Mills K, Shaw C

IMG-09 Fasciculation analysis reveals a novel adverse predictor of survival in ALS
Wannop K, Bashford J, Mills K, Shaw C

IMG-10 Distribution patterns of fasciculations in ALS: a ultrasonographic study
Suzuki Y-I, Shibuya K, Misawa S, Sekiguchi Y, Suichi T, Tsuneyama A, Nakamura K, Kano H, Kuwabara S

IMG-11 Ectopic impulse generation in peripheral nerve hyperexcitability syndromes and ALS
Noto Y-I, Simon N G, Selby A, Garg N, Vucic S, Kiernan M C

IMG-12 Longitudinal assessment of individual muscle changes in MND
Jenkins T M, Alix J JP, Fingret J, Esmail T, Hoggard N, Baster K, McDermott C J, Shaw P J, Wilkinson I D

IMG-13 Assessment of upper motor neuron in ALS and MSA using CMCT
Otsuka J, Shirota Y, Hamada M, Toda T

IMG-14 MND with malignancy: a pathophysiologically distinct entity of MND?
Higashihara M, Menon P, Geevasinga N, Van den Bos M AJ, Kiernan M C, Vucic S

IMG-15 Longitudinal magneto-encephalography in early stage ALS and behavioural variant of FTD: peak frequencies and relative power in six frequency bands
Govaarts R, Beeldman E, Fraschini M, Pijnenburg Y AL, de Visser M, Stam C J, Raaphorst J, Hillebrand A

IMG-16 Assessing cortico-muscular communication patterns in MND
Coffey A, Bista S, Fasano A, Buxo T, Dukic S, McMackin R, Haverin M, Lowery M, Carson R, Nasseroleslami B, Hardiman O

IMG-17 Developing biomarkers of focal network disruptions in ALS using threshold-tracking transcranial magnetic stimulation
McMackin R, Fasano A, Tadjine Y, Mitchell M, Heverin M, Nasseroleslami B, Carson R, Hardiman O

IMG-18 Quantifying cognitive and motor preparatory dysfunction in ALS using EEG and electrical source imaging
McMackin R, Dukic S, Chipika R, Buxo T, Fasano A, Heverin M, Reilly R, Pender N, Bede P, Muthuraman M, Nasseroleslami B, Hardiman O

IMG-19 Can MRI enable an earlier or more certain diagnosis of ALS? A multi-modal quantitative MRI-based diagnostic biomarker
Welton T, Maller J J, Lebel M, Tan E T, Rowe D B, Grieve S M

IMG-20 Subcortical abnormality is a prominent indicator of evolving cortical dysfunction in ALS
Tu S, Kiernan M C, Turner M R

IMG-21 Tract pathology in ALS correlates with the D50 disease progression model
Steinbach R, Voss A, Gaur N, Mayer T E, Witte O W, Grosskreutz J

IMG-22 Clinical correlation of MRI-based brain morphometry findings in motor and non-motor areas in ALS
Barć K, Piątkowska-Janko E, Maj E, Kuźma-Kozakiewicz M

IMG-23 Cortical thickness, white matter graph network, and 18F-FDG PET reveal abnormal brain structure and function in ALS-FTD: neuronopathy or axonopathy?
Pioro E P, Rajagopalan V

IMG-24 Dystrophy pattern of motor cortex in ALS patients according to onset type
Shen D, Hou B, Liu S, Zhang K, Yang X, Liu M, Cui L

IMG-25 Gait initiation and motor preparation are impaired in ALS patients
Abidi M, de Marco G, Couillandre A, Feron M, Mseddi E, Termoz N, Querin G, Bede P, Pradat P F

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Clinical trials and trial design

CLT-01 The NEALS Consortium – a collaborative research organization
Lincoln T C, Allen C

CLT-02 Understanding and incorporating the patient and caregiver perspective in clinical trials
Proulx L, Madsen A, Daniel S, McKenzie M, McDougall F, Cantrell C, Hains A, Cho W

CLT-03 The symptoms and impacts of MND/ALS from the patient perspective
McDougall F, McKenzie M, Lewis S, DeMuro-Mercon C, Kerchner G, Cho W, Hains A, Heiman-Patterson T

CLT-04 Engaging ALS research ambassadors to help design the REFINE-ALS biomarker study
Berry J, Bedlack R, Mathews D, Agnese W, Apple S

CLT-05 A platform trial for ALS: innovative trial design to drive ALS science and accelerate the path to effective treatments
Paganoni S, Berry J, Shefner J, Andrews J, Chew S, Quintana M, Broglio K, Saville B, Macklin E, Vestrucci M, Meurer W, Chase M, Pothier L, Harkey B, Gladden C, Berry S, Cudkowicz M

CLT-06 Increasing the efficiency of ALS clinical trials using machine learning
Taylor A A, Beaulieu D, Cuerdo J, Pierce D, Conklin A, Keymer M, Ennist D L

CLT-07 The influence of clinical study inclusion criteria on baseline characteristics and disease progression in ALS
Katz J, Perdrizet J, Apple S, Zhang J, Lu P, Agnese W

CLT-08 Date of onset as an indicator and predictor of data quality in clinical research
Sherman A, Sinani E, Cudkowicz M

CLT-09 Tracking ALS progression in clinical trials with a mobile app measuring speech
Hahn S, Stegmann G, Berisha V, Liss J M, Cockroft B M, Malik F I, Meng L, Rudnicki S, Wolff A A, Shefner J

CLT-10 The impact of frequent sampling of new and established outcome measures: results of the ALS-at-home study
Shefner J M, Shelton K, Qi K, Liss J, Berisha V, Rutkove S

CLT-11 Remote longitudinal assessment of functional MND burden in a large United States registry
Statland J, Karanevich A, Wuu J, Herbelin L, Barohn R J, Benatar M, on behalf of the CReATe Consortium3

CLT-12 Blood–brain barrier disruption is associated with poor survival in ALS
Vlad B, Prell T, Gaur N, Dreger M, Witte O W, Grosskreutz J

CLT-13 Selecting appropriate outcome measures for ALS clinical trials
Arjunji R, Glowienka E, Maru B, Wiesner T, Meriggioli M, Dabbous O

CLT-14 Optimizing the ALSFRS-R as a clinical trial endpoint
de Jongh A D, van Eijk R P, van den Berg L H

CLT-15 Overhauling clinical trials for ALS: the Lighthouse II trial design
van Eijk R PA, Roes K CB, Nikolakopoulos S, Gold J, van den Berg L H

CLT-16 Design of the Phase 3, randomised, placebo-controlled trial of oral Arimoclomol in ALS: ORARIALS-01
Sundgreen C, Blaettler T, Bennett R, Rom D, Wuu J, Andersen P M, Benatar M

CLT-17 TUDCA ALS: A novel clinical trial design for disease progression
Cocco A, Tornese P, Albanese A

CLT-18 Baseline characteristics and status update of REFALS: A phase 3 study comparing oral levosimendan to placebo in patients with ALS
Cudkowicz M, Genge A, Maragakis N, Petri S, van den Berg L, Aho V, Garratt C, Sarapohja T, Al-Chalabi A

CLT-19 Study AB19001, a confirmatory, pivotal phase 3 trial of masitinib in ALS
Genge A, Ludolph A

CLT-20 Utilization of durable medical equipment in FORTITUDE-ALS
Rudnicki S, Andrews J A, Genge A, Jackson C, Lechtzin N, Miller T M, Cockroft B M, Malik F I, Meng L, Wei J, Wolff A A, Shefner J

CLT-21 Responder and subgroup analyses for FORTITUDE-ALS, a phase 2 trial of Reldesemtiv in patients with ALS
Shefner J, Andrews J A, Genge A, Jackson C, Lechtzin N, Miller T M, Cockroft B M, Malik F I, Meng L, Wei J, Wolff A A, Rudnicki S

CLT-22 Quality of life and depression measurements in FORTITUDE-ALS
Rudnicki S, Andrews J A, Genge A, Jackson C, Lechtzin N, Miller T M, Cockroft B M, Malik F I, Meng L, Wei J, Wolff A A, Shefner J

CLT-23 Impact of ALSFRS-R progression rates on outcome measures in FORTITUDE-ALS
Rudnicki S, Andrews J A, Genge A, Jackson C, Lechtzin N, Miller T M, Cockroft B M, Malik F I, Meng L, Wei J, Wolff A A, Shefner J

CLT-24 Clinical trial design for a Phase II, randomized, placebo-controlled trial of AMX0035 in ALS (CENTAUR)
Paganoni S, Cohen J B, Klee J B, Leslie K L, Yeramian P

CLT-25 Interaction (nonuniformity) of ALS progression and the efficacy of MN-166 (ibudilast)
Matsuda K, Iwaki Y, Makhay M, Dojillo J, Yasui S

CLT-26 Oral levosimendan for ALS: pharmacokinetic considerations
Ahtola-Sätilä T, Sarapohja T, Aho V V, Kivikko M

CLT-27 Estimate of an Acthar® Gel Treatment effect in ALS patients using virtual controls
Beaulieu D, Cuerdo J, Taylor A A, VanMeter S, Zhao E, Keymer M, Ennist D L

CLT-28 Safety and biological efficacy of narrow-band UVB phototherapy in ALS
Vucic S C, Menon P, Fernandez-Peñas P, Byrne S, Turner B, Booth D R, Stewar G J, Fewings N, Gatt P, Vucic S

CLT-29 Regulation of motor neuron neurotrophic molecules in autologous ALS bone marrow mesenchymal stem cells of the clinical trial NTC02917681 in relation to other cell types and tissues
Gilio J M, Jorge G C, Maximino J R, Brofman P RS, Bydlowski S P, Senegaglia A C, Rebelatto C LK, Daga D R, Chadi G

CLT-30 Clinical effects of two intrathecal infusions of autologous mesenchymal stem cells in ALS: a phase 1/2 clinical trial in a cohort of Brazilian patients
Chadi G, Jorge F MH, Busser F D, Maximino J R, Lage L APC, Pereira J, Paiva W S, Callegari D, Carvalho C RR, Brofman P RS, Senegaglia A C, Rebelatto C LK, Daga D R

CLT-31 Involvement of complement system in mesenchymal stem cell therapy for ALS
Chadi G, Maximino J R, Reis A LG, Chouman I H, Busser F D, Palmisano G, Brofman P RS, Senegaglia A C, Rebelatto C LK, Daga D R

CLT-32 Repeated intrathecal allogeneic bone marrow-derived mesenchymal stromal cells in ALS: investigator initiated trial

Oh K-W, Noh M-Y, Kwon M-S, Park J, Lee S, Kim K S, Kim S H

CLT-33 Can modulation of the gut microbiota confer disease-modifying benefit in ALS? Results of an open label, prospective trial of RaphaLX™ probiotic compound in ALS patients
Garnaas K R, Kittelsrud J, Behnke M

CLT-34 A phase 1b, open-label, dose-escalation, safety and pharmacokinetic study of IC14, an antibody to CD14, in MND
Henderson R D, Heggie S, Thorpe K, Singh G, Appleby M W, Agosti J M, Crowe D T, Ziegelaar B, Redlich G L, McCombe P A

CLT-35 Design of the Australian multicenter, randomized, double-blind, placebo-controlled study of CuATSM for treatment of ALS
Noel K, Curran J, Rowe D, Mathers S

CLT-36 Bioequivalence of CuATSM capsule and oral suspension formulations: advancing CuATSM to randomized clinical trials in ALS
Woodworth J, Kuo J, Fitzpatrick S, Lappin R, Rosenfeld C S, Noel K

CLT-37 Efficacy of edaravone in Korean ALS patients: open pilot study
Park J-S, Park J-M

CLT-38 Surveillance of using a novel, free-radical scavenger, edaravone, to investigate a survival effect for ALS patients in Japan (SUNRISE Japan): interim report
Sobue G, Hirai M, Yuki S, Ishizaki K, Nakamura H

CLT-39 Retaining physical function in ALS with edaravone: post hoc analysis of pivotal study MCI186-19
Palumbo J, Apple S, Agnese W, Hirai M, Yoneoka T, Takahashi F, Takei K, Endo M

CLT-40 Radicava/Edaravone findings in biomarkers from ALS (REFINE ALS): interim analysis
Berry J, Brooks B, Genge A, Heiman-Patterson T, Apple S, Benatar M, Bowser R, Cudkowicz M, Gooch C, Shefner J, Apple S, Agnese W, Merrill C, Nelson S

CLT-41 The impact of renal or hepatic impairment on the pharmacokinetics of edaravone after intravenous infusion
Nakamaru Y, Kakubari M, Yoshida K, Akimoto M, Kondou K

CLT-42 Effect of intravenous infusion of edaravone on QT/QTc interval
Shimizu H, Inouke S, Endo M, Nakamaru Y, Yoshida K, Natori T, Kakubari M, Akimoto M, Kondo K

THEME 10

Disease stratification and phenotyping of patients

DSP-01 Barriers to the diagnosis of MND – a South Australian study
Sharrad D F, Schultz D W

DSP-02 Validation study of clinical diagnosis of ALS: The Brain Bank for Aging Research (BBAR) project
Matsubara T, Izumi Y, Miyamoto R, Oda M, Nodera H, Higashihara M, Sengoku R, Oki R, Fujita K, Kawarai T, Watanabe C, Saito Y, Kaji R, Murayama S

DSP-03 Investigating hidden Gelsolin amyloidosis which mimick slowly progressing MND using genetic test
Park J, Kim Y-E, Lee S, Oh K-W, Nahm M Y, Il Jang D, Ki C-S, Kim S H

DSP-04 Improvements in the definition of biomarkers for Spinal Muscular Atrophy (SMA) type III and IV: a multimodal longitudinal study
Querin G, Hogrel J-Y, Debs R, Marchand-Pauvert V, Stojkovic T, Behin A, Laforet P, Salachas F, Bede P, Lenglet T, Pradat P-F

DSP-05 On-the-spot assessment of venous creatinine as a marker for change in fat-free mass and disease progression in patients with MND
Ngo S T, Holdom K J, Lucia D, van Eijk R PA, van den Berg L H, McCombe P A, Henderson R D, Steyn F J

DSP-06 The world according to the D50 model of ALS progression
Grosskreutz J, Al-Chalabi A, van den Berg L, de Carvalho M, Chio A, Corcia P, Couratier P, van Damme P, Grehl T, Ingre C, Kiernan M, Koritnik B, Kuźma-Kozakiewicz M, Meyer T, Neuwirth C, Petri S, Talman P, Uysal H, Veldink J, Weber M, Wicks P, Zidar J

DSP-07 Signigficant events during ALS progression according to the D50 model in the ONWebDUALS cohort
Grosskreutz J, de Carvalho M, Fartmann F, Gromicho M, Kuźma-Kozakiewicz M, Petri S, Stubendorff B, Szacka K, Uysal H

DSP-08 Structural and functional implications of cortical dysfunction on clinical disease progression in ALS
Dharmadasa T, Wang C, Simon N G, Howells J, Kiernan M C

DSP-09 Rapid reprogramming method differentiates CuATSM responders/nonresponders from ALS patient population
Dennys-Rivers C, Zhang X, Rodrigo R, Estevez A, Kaspar B, Beckman J, Franco M C, Meyer K

DSP-10 A personalized medicine approach for ALS/MND
Rosenfeld J, Dey D, Yu S F, Macieik A, Selvarajah S, Paulvannan D, Lingappa V R

DSP-11 The clinical phenotype of motor neuron diseases in Bangladesh
Jenkins T M, Bandmann O, Hoque A, Alam B, Chowdhury J, Shaw P J, Mohammad Q D

DSP-12 The Demographic and clinical characteristics of ALS in Malaysia
Abdul-Aziz N A, Loh E C, Goh K-J, Latif L A, Capelle D, Shahrizaila N

DSP-13 The genotype and phenotype spectrum of familial ALS in China
Yang X, Zhang K, Liu S, Shen D, Liu Q, Liu M, Cui L

DSP-14 Tracking bulbar impairment using the Beiwe smartphone app
Connaghan K, Green J, Paganoni S, Chan J, Weber H, Collins E, Richburg B, Eshghi M, Onnela JP, Berry J

DSP-15 Foreign Accent Syndrome (FAS) and ALS: a case report
Sierra H N M, Borges R M, Frabasile L M, Alves P C L, Neves J W C, dos Santos Salvioni C C, Oliveira A S B, Oda A L

DSP-16 What matters most to patients with ALS: initial validation of the ALS Health Index (ALS-HI), a multi-faceted patient reported outcome measure
Zizzi C, Wagner E, Benatar M, Heatwole C

DSP-17 Early treatment effects of Riluzole in ALS-MND 2: Isometric strength improvements in sentinel muscles
Brooks B R, Bravver E K, Desai U G, Jalali N, Dawson W B, Bockenek W L

THEME 11

Cognitive and psychological assessment and support

COG-01 Phenotypic variation in ALS-FTD and effect on survival
Ahmed R M, Devenney E M, Strikwerda-Brown C, Hodges J R, Piguet O, Kiernan M C

COG-02 Cognitive and behavioural changes predict poorer survival in ALS
Nguyen C H, Caga J, Highton-Williamson E, Kiernan M C, Huynh W

COG-03 Cognitive reserve as a mediator of cognitive decline in ALS
Costello E, Ryan M, Pender N, Hardiman O

COG-04 Do cognitive or behavioural problems explain satisfactory QoL in ALS?
Lulé D, Schrempf T, Uttner I, Ludolph A C

COG-05 Respiratory impairment is associated with cognitive dysfunction in ALS
Huynh W, Sharplin L E, Caga J, Highton-Williamson E, Kiernan M C

COG-06 Cognition and behavior in Japanese ALS patients
Watanabe Y, Adachi T, Takigawa H, Hanajima R, ALS-FTD-Q-J Research Group

COG-07 Clinical usefulness of neuropsychological scales for evaluating cognitive impairment in Japanese patients with ALS
Nagashima K, Fujita Y, Ikeda M, Ikeda Y

COG-08 A study of non-motor manifestations in patients with ALS
Chowdhury A, Biswas A, Pandit A

COG-09 Early treatment effects of Riluzole in ALS-MND 1: correction of hand grip apraxia in ALS-FTD
Brooks B R, Bravver E K, Desai U G, Jalali N, Dawson W B, Bockenek W L, Lindblom S S

COG-10 A systematic review of cognitive screening tools used in MND
Mayberry E J, McTiffin M H, Tooth C L, McDermott C J

COG-11 Development of the Online Carer's Questionnaire (OCQ) behaviour screen for MND
Robinson G, Ceslis A

COG-12 The role of relationships and social support on the psychological wellbeing of ALS caregivers
Carney S, Wheeler C, Heverin M, Galvin M, Pender N, Hardiman O

COG-13 Understanding the needs of ALS caregivers
Carney S, Galvin M, Pender N, Hardiman O

COG-14 Augmentative and alternative communication in ALS: a systematic review
Abbas-Kayano R T, Chadi G

THEME 12

Respiratory and nutritional management

RNM-01 Weight stability is associated with longer survival in ALS
Wei Q, Ou R, Chen Y, Chen X, Cao B, Hou Y, Zhang L, Shang H

RNM-02 Temporal variation of anthropometric parameters and functional scores of patients diagnosed with ALS/MND
dos S Salvioni C C, Ottoboni M M, Campos M C P, Oda A L, Alves P C L, Sierra H N M, Neves J W C, Frabasile L, Oliveira A S B

RNM-03 Factors associated with oral nutritional behaviours in people with MND: a systematic review
Williams I, Norman P, Essat M, Archer R, Coates E, Zarotti M, Clowes M, Beever D, Hackney G, White S, Stavroulakis T, McDermott C, on behalf of the HighCALS group3

RNM-04 Serum albumin as an indicator of gastrostomy in patients with MND/ALS: preliminary results from a single tertiary hospital
Yang J, Lee K-W, Choi S-J

RNM-05 Long-term outcomes of gastrostomy in patients with ALS with respiratory compromise
Choi S-J, Min Y G, Kwon Y N, Yang J, Sung J-J, Lee K-W

RNM-06 Comparative analysis of the types of alternative feeding route recommended for ALS/MND
Frabasile L M, Alves P C L, Borges R M, Sierra H N M, Salvioni C C S, Oliveira A S B, Oda A L

RNM-07 The level of functional hydration assessment according to dysphagia in MND/ALS
Oda A L, Borges R M, Frabasile L M, Alves P C L, Sierra H N M, Neves J W C, dos Santos Salvioni C C, Olliveira A S B

RNM-08 The safety of PEG in patients with ALS using non-invasive positive pressure ventilation: a retrospective study
Tominaga N, Shimizu T, Uchino A, Ogino Y, Ogino M

RNM-09 Comparison of voluntary and reflex cough effectiveness in health and individuals with ALS
Gray L T, Locatelli E, Plowman E K

RNM-10 The impact of respiratory muscle training on cough efficacy and physical function in patients with neuromuscular disease: a systematic review and meta-analysis
Watson K

RNM-11 Correlation between forced vital capacity (FVC) and collapse of the upper airways (retropalatal and retrolingual spaces)
Dorca A, Sisteroli D

RNM-12 Inspiratory pressurization therapy associated with expiratory muscular training in ALS/ MND
Dorca A, Sisteroli D, Maldaner V

RNM-13 Sleep-disordered breathing can be asymptomatic in patients with ALS
Aziz N A A, Ng W J, Loh E C, Capelle D, Goh K-J, Latif L A, Shahrizaila N

RNM-14 Identifying how many SNIPs to get maxscore in patients with MND
Fortune J, Meldrum D, Murray D, Fenton L, Tattersall R, Hardiman O

RNM-15 Symptoms of hypoventilation most sensitive to detect reduced respiratory function in patients with ALS/MND
Helleman J, Kruitwagen-van Reenen E T, Kruithof W J, Bakers J, Visser-Meily J MA, van den Berg L H, Beelen A J

RNM-16 Respiratory function and infections in people with MND
Sheers N, Berlowitz D J, Rochford P, Dirago R, Naughton P, Henderson S, Howard M E

RNM-17 Implementing home care respiratory protocols in ALS
Brockenbrough P, Rhodes R, Pearson K, Vota S

RNM-18 A survey exploring the practice of healthcare professionals in delivering non-invasive ventilation to people with MND in the UK
Musson L S, Stavroulakis T, Baxter S K, Norman P, O'Brien D, Elliott M, Bianchi S, Kaltsakas G, Hobson E V, McDermott C J

RNM-19 Factors that influence the tolerance of non-invasive ventilation in ALS: results from single centre in Brazil
Silva V Z M, Moura M, Franco H, Mateus S, Dorça A

RNM-20 MND respiratory supports: the impact of non-invasive ventilation on MND patients
Pradeepan S, Yates N, Vogel N, Paech G

RNM-21 Diaphragm pacing impairs local myofiber reinnervation in ALS
Guimarães-Costa R, Niérat M-C, Rivals I, Morélot-Panzini C, Romero N B, Menegaux F, Salachas F, Gonzalez-Bermejo J, Similowski T, Bruneteau G

RNM-22 Proposition for the assessment of peak cough flow with an oronasal mask in ALS/MND patients
Borges R M, Alves P C L, Sierra H N M, Frabasile L M, Neves J W C, dos Santos Salvioni C C, Oliveira A S B, Oda A L

RNM-23 Clinical criteria for the recommendation of invasive ventilation for MND/ALS patients
Alves P C L, Borges R M, Frabasile L M, Sierra H N M, Neves J W C, Flores S C, Rocha M S G, dos Santos Salvioni C C, Oliveira A S B, Oda A L

RNM-24 Amount of publicly available survey information on trends in the number of home-care patients with ALS and invasive TPPV with tracheostomy in Japan: a preliminary survey of prefectural coordinators regarding patients with intractable diseases
Fukuroku K, Narita Y, Ishikawa T, Nakai M, Matsuda N

RNM-25 Prognosis of TIV therapy for ALS patients in a multicenter prospective cohort
Hayashi N, Atsuta N, Yokoi D, Nakamura R, Katsuno M, Izumi Y, Kanai K, Hattori N, Akira T, Morita M, Kano O, Shibuya K, Kuwabara S, Suzuki N, Aoki M, Masaya O, Aiba I, Mizoguchi K, Ishihara T, Onodera O, Ohta Y, Abe K, Kaji R, Sobue G

RNM-26 Registry of endpoints and validated experiences in ALS (REVEALS): a prospective observational study of respiratory function and morbidity in ALS
Murray D, Meldrum D, McConnell R, Chio A, Al-Chalabi A, van Den Berg L, Van Damme P, McDermott C, Hardiman O

RNM-27 The cause of death in pathologically confirmed ALS with mechanical ventilation assist, a retrospective institute-based study
Komai K, Ishida C, Takahashi K, Tagami A, Motozaki Y, Kawashima A

THEME 13

Clinical management and support

CMS-01 Genetic testing for familial ALS: insights and challenges
Crook A, Hogden A, Mumford V, Blair I P, Williams K L, Rowe D B

CMS-02 Preventing ALS through reproductive genetic testing: costs and complexities
Crook A, Mumford V, Hogden A, Fell R, Blair I P, Williams K L, Rowe D B

CMS-03 The importance of the reception performed by ABrELA's social service to ELA patients and their families
Campos C H M, Cruz F T, Oda A L

CMS-04 The diagnostic experience in MND: a UK survey of the perspectives of people living with MND
O'Brien M R, Oliver D, Aoun S, Mc Dermott C J, Kirton J, Pearson E

CMS-05 Changes in diurnal and nocturnal activity occurs in ALS/MND patients
Lucia D, McCombe P A, Henderson R D, Steyn F J, Ngo S T

CMS-06 A survey of healthcare professionals on the measurement of physical functioning in ALS/MND and attitudes to development of technology based measurement and monitoring solutions
Murray D, Meldrum D, Hayden C, Hardiman O

CMS-07 Motor symptoms and physical activity assessment in ALS: a systematic review
Chadi G, de Aquino L M, Silva R, Alves A, Gomide-Çakmak V C

CMS-08 Are we under dosing our patients with mid-stage disease ALS? When "usual" activities becomes rowing across the Atlantic
Hayes H A, Alderman A, Gibson S, Bromberg M

CMS-09 Robot-assisted training using Hybrid Assistive Limb for ALS patients
Kano O, Murata K, Sugisawa T, Ebina J, Morioka H, Kyuzen M, Sawada M, Hanashiro S, Nagasawa J, Yanagihashi M, Fukuda H, Uchi M, Kawabe K, Ikeda K, Washizawa N, Ebihara S

CMS-10 The ALS Steering Wheel: A multidisciplinary approach to evaluating driving in ALS
Berry K, Salmon K, Vitale T, Saunders N, Genge A

CMS-11 Cessation of driving in individuals with ALS
Hayes H A, Hu N, Wang X, Leatham J L, Gibson S, Bromberg M

CMS-12 An investigation into whether board certified neurologists are conscious of supporting continuing employment in their patients
Ogino M, Eguchi H, Babayev T, Ogino Y, Tutsumi A

CMS-13 An example of possibility for family members continue working while providing care for ALS/MND patients
Adachi K, Ishijima K, Kawaguchi Y, Nakajima T

CMS-14 Information needs and resource preferences in Korean Family caregivers of Patients with ALS
Chu H S, Son B, Kim S H, Oh J

CMS-15 Aspiring to minimise aspiration: prevalence and predictors of aspiration in progressive neurological disease
Klein P, Ferencz N, Jackson N, Keage M

CMS-16 Providing collars for people with MND: trialling not prescribing
Gibb R M

CMS-17 Clinical implications of upper esophageal sphincter restriction in MND
Cock C, Francis R, Doeltgen S, Omari T

CMS-18 Interaction between decline of swallowing and cognitive function in MND
Francis R, Attrill S, Cock C, Doeltgen S

CMS-19 A clinical bulbar assessment scale for ALS (C-BAS)
Ball L J, Pattee G L

CMS-20 Developing a message banking pathway: the Irish experience through multi-agency collaboration
Doyle L, Fitzsimons C, Jagoe C

CMS-21 A single adjustment of the scanning-speed of the device affected each participant's feeling and number of letters as an effect of short-term training programs on augmentative and alternative communication to support ALS/MND patients
Tanaka Y, Narita Y, Ishikawa T, Nakai M, Imura T, Takahashi E, Mizumoto C

CMS-22 Gross numbers of letters as the effect of a short-term training program for augmentative and alternative communication on health-care students after 6 months
Ishikawa T, Narita Y, Nakai M, Imura T, Tanaka Y, Takahashi E, Mizumoto C

CMS-23 Verification of the effect of medical coordinator of intractable disease on the regional medical care network for intractable disease in Japan
Hotta M, Tanaka Y

CMS-24 Virtual reality in ALS
Vota S A, Pearson K, Rhodes R, Brockenbrough P

CMS-25 Improved survival in ALS patients following intrathecal administration of autologous Bone Marrow Mononuclear Cells (BMMNCs)
Sane H, Paranjape A, Varghese R, Pradhan R, Nair V, Badhe P, Gokulchandran N, Sharma A

CMS-26 The effect of riluzole oral film on swallowing safety in individuals with ALS
Anderson A, DiBiase L, Plowman E, Wymer J, Chapin J, Heller A, Buan C, Jung C, Slatko G

CMS-27 Nursing driven initiative to increase tolerability and compliance of BHV-0223 novel therapy in ALS patients
Ranzinger L, Newell-Sturdivant A, Jones J, Brooks B

CMS-28 Zydis riluzole 40mg oral disintegrating tablet biohaven expanded access program – single center experience
Jones J, Ranzinger L H, Brooks B R

CMS-29 Real-world evidence of Radicava® (edaravone) for ALS from a national infusion center database in the United States
Heiman-Patterson T, Perdrizet J, Apple S, Prosser B, Agnese W

CMS-30 A preliminary analysis of the feasibility and efficacy of edavarone at a multidisciplinary ALS clinic
Gray L T, Scarlett F, Pereda M, Locatelli E

CMS-31 Discussing personalised prognosis in ALS: development of a communication guide
van Eenennaam R M, Kruithof W, van Es M A, Reenen E K-V, Westeneng H-J, Visser-Meily A, van den Berg L H, Beelen A

CMS-32 A comprehensive approach to end of life discussions in ALS
Brockenbrough P, Maldonado J, Gebhardt M, Vota S

THEME WP

Biomedical and clinical work in progress

WP-01 Prevalence of ALS in the United States, 2016
Mehta P, Larson T, Horton K

WP-02 Utilizing capture-recapture methodology to estimate the missing ALS prevalent cases in the United States, 2016
Horton K, Larson T, Mehta P

WP-03 Critical epochs of environmental exposures and gene-environment-time interactions in ALS
Bradley W G, Andrew A S, Chio A, D'Ovidio F, Shi X, Pioro E P, Guetti B, Torbick N, Butt T, Traynor B, Gui J, Stommel E W

WP-04 MND phenotypes and premorbid status in the Trøndelag region, Norway
Taraldsen M D, Bjørnstadjordet M, Meisingset T W, Geir Bråthen G

WP-05 Assessing structural- and copy number-variation in MND
Fifita J A, McCann E P, Williams K L, Chan Moi Fat S, Henden L, Grima N, A Twine N A, Bauer D C, Kiernan M, Nicholson G A, Rowe D B, Blair I P

WP-06 Long-read sequencing approaches to investigate the contribution of human-specific variable number tandem repeats to ALS susceptibility
Course M M, Gudsnuk K, Valdmanis P N

WP-07 Novel patient-derived 3D in vitro models of microglia to study neuroinflammation in ALS
Cuni-Lopez C, Quek H, Oikari L E, Stewart R, White A R

WP-08 NF-kB activation in astroglia in mouse models of ALS
Kroeger C, Baumann B, Ouali N, Schurr C, Wirth T

WP-09 Good riddance to bad rubbish: waste disposal in human ALS post-mortem pericytes
Dunne C M, Mouravlev A, Scotter E L

WP-10 Investigating TDP-43 mislocalisation using novel human induced pluripotent stem cell models
Talbot J, Stellon D, Chear S, Atkinson R, Perry S, Hewitt A, King A E, Cook A L

WP-11 Characterising CYTSB as a potential therapeutic target for organ pathology in SMA
Munir R, Hunter G

WP-12 A combined structural, functional and neurochemical MRI signature of motor system excitability in ALS
Edmond E C, Hinson E L, Clarke W, Talbot K, Stagg C J, Turner M R

WP-13 Diagnostic utility of the split-hand index in ALS phenotypes
Hannaford A, Higashihara M, Van den Bos M, Geevasinga N, Vucic S, Menon P

WP-14 People living with ALS and their caregivers' input into drug development in Europe
Galvin M, Hardiman O, Heverin M, McDermott C, Laverdiere A, Charpentier B, O'Callaghan L, Bowyer K

WP-15 WITHDRAWN

WP-16 Phase 1/2a, double-blind, placebo-controlled study with an open-label extension of ropinirole hydrochloride extended-release tablets (ROPALS trial based on the iPSC drug repositioning)
Takahashi S, Morimoto S, Okada K, Daté Y, Ito D, Nakahara J, Okano H

WP-17 The Japanese early-stage trial of high dose methylcobalamin for ALS (JETALS): Protocol of the phase III trial and validation of the updated Awaji criteria for the diagnosis of early stage ALS
Oki R, Izumi Y, Fujita K, Nodera H, Yamazaki H, Haji S, Osaki Y, Miyamoto R, Sato Y, Futami A, Maeda K, Takechi K, Sakaguchi S, Nokihara H, Yanagawa H, Kuwabara S, Kaji R, JETALS Collabolators

WP-18 Clinical characteristics of young-onset ALS in Korean cohort
Lee S, Park J, Oh K-W, Il Jang D, Hyun Kim S

WP-19 Machine learning for novel prognosis prediction and ALS patient stratification
Grollemund V L, Pradat-Peyre J-P, Delbot F, Bede P, Corcia P, Couratier P, Meininger V, Pradat P-F

WP-20 Intranasal oxytocin for terminal ALS with social interaction deficits
Fujita K, Shimazu T, Maruki Y

WP-21 Assessing assistive technology use and needs by individuals with ALS/MND
Feldman S, Dryden E

WP-22 The addition of rotational and adjustable flexion components to cervical support
Feldman S, Goren M, Harris D, Dryden E, Nevasekar N, Ayaz I

WP-23 The MotOrtose project - development of a motorized upper extremity orthosis for ALS
Meisingset T, Bråthen G, Lien T

WP-24 High-throughput screening for the development of novel ALS treatments
Colicchia V, Hansel C, Porębski B, Häggblad M, Corman A, Li X, Lidemalm L, Hühn D, Carreras-Puigvert J, Fernández-Capetillo O

THEME CP

Care Practice

CP-01 Challenges and success of rowing across the Atlantic by an individual with ALS
Hayes H A, Alderman A, Gibson S, Bromberg M

CP-02 ALS and full-marathon: Response to edaravone treatment
Yoshino H

CP-03 A pilot project to determine if standard ayurvedic treatment protocol alters the progression of ALS
Paul A, James F A, VP J K, Karalam S B

CP-04 A systematic review of diet and exercise clinical trials among people with ALS
Zheng E R Y, Lau T, Vucic S, Flood V M

CP-05 Supporting choice in dysphagia management through naturally thick drinks
Doyle L, Heraughty N

CP-06 The impact of gastrointestinal related symptoms on nutrition intake - the role of the dietitian in managing gastrointestinal complications in persons living with MND
Zandi E, Savvaidis A

CP-07 Developing a web-based patient decision aid for gastrostomy in MND: the DiAMoND study
Evill R, Bloomfield S, Erridge C, Foster C, Hardcastle M, Hogden A, Kidd A, Lisiecka D, McDermott C, Morrison K, Recio-Saucedo A, Rickenbach L, White S, Williams P, Wheelwright S

CP-08 The effect of feeding tube placement on body mass index and ALSFRS-r
Rhodes R, Brockenbrough P, Pearson K, Vota S, Gwathmey K

CP-09 Oscillating PeP (O-PeP) devices versus Expiratory Muscle Trainers (EMTs) for lung recruitment in ALS patients prior to NIV
Heimann-Patterson T, Harris D, Mergner D, Pepper H

CP-10 Pneumothorax in neuromuscular disease associated with lung volume recruitment and mechanical insufflation-exsufflation
McDonald L, Berlowitz D J, Howard M E, Rautela L, Chao C, Sheers N

CP-11 Long-term follow-up for patients undergoing pre-symptomatic genetic testing for C9orf72 and SOD1
Kinsley L M

CP-12 Familial ALS and FTD: identifying the need for a new genetic counselling model of care
Crook A, Rowe D B, Fell R, Jacobs C, Newton-John T, McEwen A

CP-13 Differentiating needs of informal caregivers of ALS patients across the caregiving course: a systematic review
Poppe C, Iseli L, Koné I, Elger B S, Wangmo T

CP-14 Family caregivers in ALS and their vital need for self-care
Verwey M A

CP-15 Group interventions for ALS caregivers: a randomised controlled trial protocol
Burke T, O'Raghallaigh J W, Maguire S, Galvin M, Heverin M, Hardiman O, Pender N

CP-16 Interventions targeting the psychological well-being of carers of people with MND: a systematic review
Cafarella P, Effing T, Chur-Hansen A

CP-17 Efficacy of a group-based mindfulness program for people with MND and their family caregivers
Gluyas C, Haylock P, Atkins K, Davis M-C, Conroy H, Fisher F, Velissaris S

CP-18 Animal assisted activity with service dogs "One project" to heal the patients with ALS who have been hospitalized long term
Ogino Y, Ogino M, Komori T

CP-19 Mental health support plans for people affected by MND
Bethell A

CP-20 The needs and psychological distress of family caregivers after the death of the ALS patient
Knudsen L F

CP-21 Support for patients with intractable neurological diseases to select treatment options
Nagase M

CP-22 Assessing preference heterogeneity with respect to MND treatment: a discrete choice experiment
Farrar M A, Street D, Carey K, Kasparian N, De Abreu Lourenco R

CP-23 The development of a multidisciplinary specialist communication and assistive technology (CAT) clinic within the New South Wales (NSW) public health sector
Gibb A, Signorelli M, Thornley M

CP-24 Occupational therapist and the benefits of the online learning environment for clinical intervention for people living with MND
Brown R, Solomon S

CP-25 How open-ended questions posed by clients have informed, impacted and evolved an occupational therapy service from inception to now - 5 years on
Knight R E

CP-26 How an occupational therapy service has changed and evolved from direct client care provision to consultative service methods, to best meet the needs of people with MND post National Disability Insurance Scheme (NDIS)
Knight R E

CP-27 OT for people with MND: adjusting and adapting to rapidly changing function
Solomon S J

CP-28 Reflections on the care of people with MND/ALS care over 35 years
Oliver D J

CP-29 Four quadrants of care
Quick L K, Baigent S

CP-30 Shhh...we don't talk about that!
Quick L K

CP-31 Metro South chronic disease MND gastrostomy change service
Quick L K, Ebzery M

CP-32 A dying wish: organ donation in MND – ethics law and practice in the Australian context
Sheahan L, Herz H, Flynn G

Exhibitors

ART LOVES SCIENCE FOUNDATION

mnd Australia

mnd Western Australia

Biogen

OPC HEALTH

brainstorm cell therapeutics

TalarMade
Made with clinical excellence in mind

Cytokinetics

ORION PHARMA
Building well-being

INTERNATIONAL ALLIANCE OF ALS/MND ASSOCIATIONS

Seqirus
A CSL COMPANY

Summary of events/locations

Wednesday 4 December

07.00 – 18.00	Registration International Symposium	*Reception Desk*	*Level 2*
07.00 – 19.00	Speaker Room	*Meeting Room 12*	*Level 2*
08.30 – 10.30	Symposium Joint Opening Session	*Riverside Theatre*	*Level 2*
10.30 – 11.00	Refreshments, Networking and Exhibitors	*Riverside Theatre Foyer*	*Level 2*
11.00 – 12.45	Symposium Clinical Session 2A	*Riverside Theatre*	*Level 2*
11.00 – 12.30	Symposium Biomedical Session 2B	*Bellevue Ballroom 2*	*Level 3*
11.00 – 12.45	Symposium Alternative Session 2C	*Meeting Rooms 1-3*	*Level 2*
12.30 – 14.00	Lunch and Networking Exhibitors	*Bellevue Ballroom 1/Bellevue Foyer* *Riverside Theatre Foyer*	*Level 3* *Level 2*
12.30 - 14.00	REFALS (closed meeting)	*Meeting Room 8*	*Level 2*
14.00 – 15.30	Symposium Clinical Session 3A	*Riverside Theatre*	*Level 2*
14.00 – 15.30	Symposium Biomedical Session 3B	*Bellevue Ballroom 2*	*Level 3*
14.00 – 15.30	Symposium Alternative Session 3C	*Meeting Rooms 1-3*	*Level 2*
15.30 – 16.00	Refreshments, Networking and Exhibitors	*Riverside Theatre Foyer*	*Level 2*
16.00 – 17.45	Symposium Clinical Session 4A	*Riverside Theatre*	*Level 2*
16.00 – 17.40	Symposium Biomedical Session 4B	*Bellevue Ballroom 2*	*Level 3*
16.00 – 17.40	Symposium Alternative Session 4C	*Meeting Rooms 1-3*	*Level 2*
18.00 – 20.00	Global Walk to D'Feet and Barbecue Reception	*External and Summer Garden*	*Level 2*

Thursday 5 December

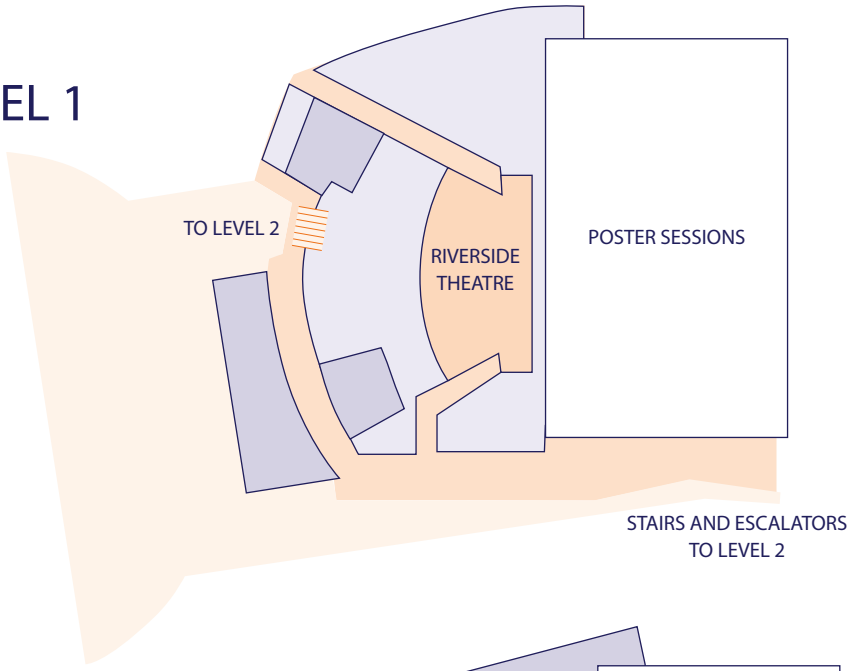
07.00 – 18.00	Registration International Symposium	*Reception Desk*	*Level 2*
07.00 – 19.00	Speaker Room	*Meeting Room 12*	*Level 2*
07.15 – 08.15	Advancing Innovation in ALS: The Importance of Environment vs Genes in the Development of ALS (Sponsored by Cytokinetics)	*River View Room 5*	*Level 2*
08.30 – 10.00	Symposium Clinical Sessions 5A	*Riverside Theatre*	*Level 2*
08.30 – 10.00	Symposium Biomedical Session 5B	*Bellevue Ballroom 2*	*Level 3*
08.30 – 10.00	Symposium Alternative Session 5C	*Meeting Rooms 1-3*	*Level 2*
10.00 – 10.30	Refreshments, Networking and Exhibitors	*Riverside Theatre Foyer/Pavilion 1*	*Level 2/Level 1*
10.30 – 12.30	Poster Session A	*Pavilion 1*	*Level 1*
12.30 – 14.00	Lunch and Networking Exhibitors	*Bellevue Ballroom 1/Bellevue Foyer* *Riverside Theatre Foyer*	*Level 3* *Level 2*
14.00 – 15.30	Symposium Clinical Sessions 6A	*Riverside Theatre*	*Level 2*
14.00 – 15.30	Symposium Biomedical Session 6B	*Bellevue Ballroom 2*	*Level 3*
14.00 – 15.30	Symposium Alternative Session 6C	*Meeting Rooms 1-3*	*Level 2*
15.30 – 16.00	Refreshments, Networking and Exhibitors	*Riverside Theatre Foyer*	*Level 2*
16.00 – 17.50	Symposium Clinical Sessions 7A	*Riverside Theatre*	*Level 2*
16.00 – 17.45	Symposium Biomedical Session 7B	*Bellevue Ballroom 2*	*Level 3*
16.00 – 17.45	Symposium Alternative Session 7C	*Meeting Rooms 1-3*	*Level 2*
18.00 – 20.00	Poster Session B	*Pavilion 1*	*Level 1*
19.15 – 20.45	BRAIN-MEND consortium meeting (closed meeting)	*Meeting Room 10*	*Level 2*

Friday 6 December

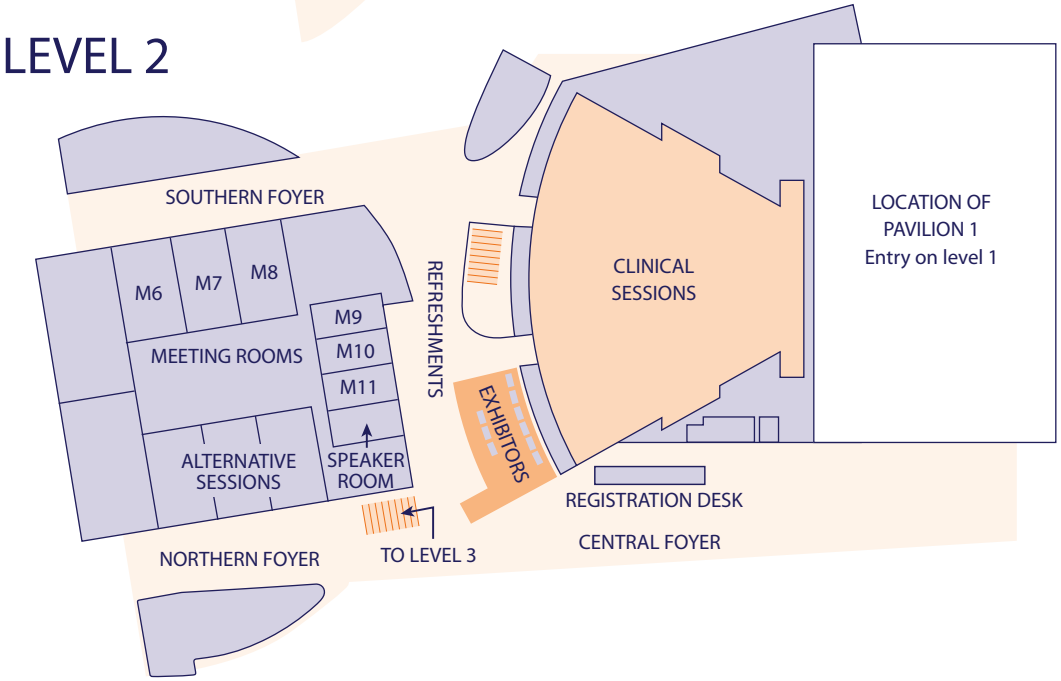
07.00 – 13.30	Speaker Room	*Meeting Room 12*	*Level 2*
08.00 – 12.00	Registration International Symposium	*Reception Desk*	*Level 2*
08.30 – 10.00	Symposium Clinical Sessions 8A	*Riverside Theatre*	*Level 2*
08.30 – 09.50	Symposium Biomedical Session 8B	*Bellevue Ballroom 2*	*Level 3*
10.00 – 10.30	Refreshments, Networking and Exhibitors	*Riverside Theatre Foyer*	*Level 3*
10.30 – 12.30	Symposium Clinical Sessions 9A	*Riverside Theatre*	*Level 3*
10.30 – 12.30	Symposium Biomedical Session 9B	*Bellevue Ballroom 2*	*Level 3*
12.30 – 14.00	Lunch and Networking Exhibitors	*Bellevue Ballroom 1/Bellevue Foyer* *Riverside Theatre Foyer*	*Level 3* *Level 3*
14.00 – 15.30	Symposium Joint Closing Session	*Riverside Theatre*	*Level 2*

Locations

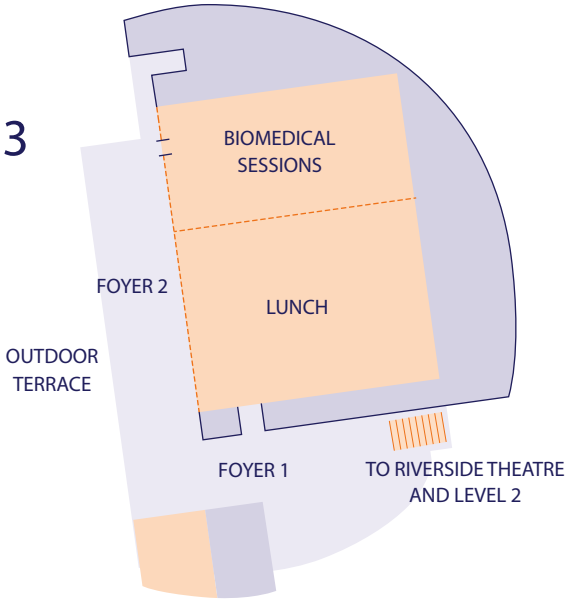
LEVEL 1



LEVEL 2



LEVEL 3



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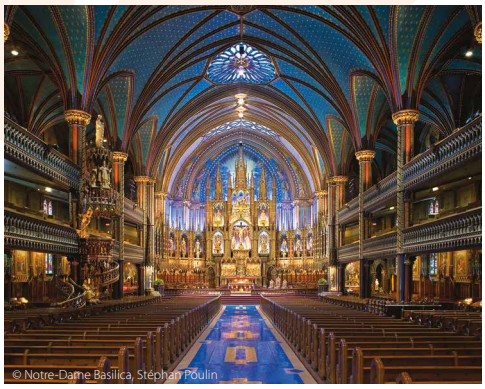

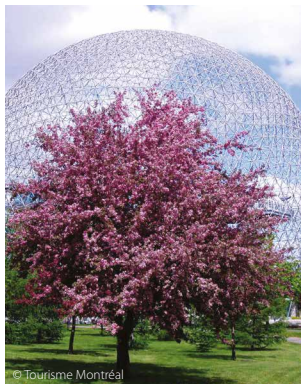

Join us in Montreal, Canada 9-11 December 2020

Provisional abstract submission deadline: 4 June 2020

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