mnda motor neurone disease association

27th international symposium on ALS/MND

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Dublin Republic of Ireland

7 – 9 December 2016

Programme

Host: Irish Motor Neurone Disease Association (IMNDA)

IMNDA CARE AND RESEARCH

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

mnda motor neurone disease association

27th international symposium on ALS/MND

Organiser of the symposium:

mnda motor neurone disease association

Motor Neurone Disease Association

10-15 Notre Dame Mews,
Northampton NN1 2BG, UK
Tel: (-) 44 1604 611845 or 611822
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Host for the symposium:

iMNDA CARE AND RESEARCH

Irish Motor Neurone Disease Association

Coleraine House, Coleraine Street, Dublin 7
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Held in co-operation with:

International Alliance of ALS/MND Associations

The International Alliance of ALS/MND Associations

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Website: www.alsmndalliance.org

CME Accreditation

The 27th 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).

U.E.M.S.

The '27th International Symposium on ALS/MND' is accredited by the European Accreditation Council for Continuing Medical Education (EACCME) to provide the following CME activity for medical specialists. The EACCME is an institution of the European Union of Medical Specialists (UEMS), www.uems.net.

The '27th International Symposium on ALS/MND' is designated for a maximum of 16 hours of European external CME credits. Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

Through an agreement between the European Union of Medical Specialists 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/go/internationalcme.

Live educational activities, occurring outside of Canada, recognized by the UEMS-EACCME for ECMEC credits 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

Fáilte go Baile Átha Cliath – Welcome to Dublin!

The Irish Motor Neurone Disease Association extends a warm welcome to you to Dublin for the 27th International Symposium on ALS/MND and the accompanying 24th Annual Meeting of the International Alliance of ALS/MND Associations. Participation in these important meetings allows us to work together towards our global vision 'A world free from Motor Neurone Disease'.

The name Dublin comes from the Gaelic words "Dubh Linn", referring to a black pool at the time of the city's foundation over 1000 years ago. Combining a solid reputation for education and innovation, with great accessibility, it is no coincidence that Dublin is now the European headquarters of many of the world's leading corporations, and a centre for academic research and innovation.

The Irish Motor Neurone Disease Association (IMNDA) is the only organisation of its kind in the country. We are dedicated to working on behalf of people living with MND and their families and carers. Our key services include home visiting by an MND nurse, financial assistance towards home care help and the supply of specialised equipment on loan. We also fund and promote research into the causes and treatments of MND.

The IMNDA works very closely and supports the Irish MND Research Group based at Beaumont Hospital, and Trinity College Dublin, led by Professor Orla Hardiman. The work of the Irish MND Research Group focuses on deep phenotyping, biomarker development and genomics. In collaboration with researchers across the world, it seeks to expand our understanding of MND, by recognising and studying all aspects of disease heterogeneity and by developing new models of disease classification that will support a precision medicine approach towards new treatments.

Dublin has not forgotten its roots and is steeped in a rich cultural heritage that begs to be explored. All year round, the city is alive with music, art and theatre of all kinds and, of course, art galleries and museums abound. All complemented by an impressive range of restaurants and cafés, the best golf courses, exciting surfing spots, scenic coastlines and picturesque mountains.

As the famous Irish poet William Butler Yeats wrote 'There are no strangers here, only friends that have not yet met.' Together we will fight for a world free from MND/ALS.

Aisling Farrell

CEO, Irish Motor Neurone Disease Association

Foreword

Welcome to the 27th International Symposium on ALS/MND. This year's programme continues the tradition of showcasing the most important developments in both science and clinical practice. The remarkable discoveries in the genetics of amyotrophic lateral sclerosis in the last 10 years have provided a platform for studies which are now revealing important insights into the key mechanisms leading to motor neuron degeneration and the overlap with frontotemporal dementia. Although it is encouraging to see more clinical trials than ever being presented at the symposium, ALS/MND is a clinical syndrome with complex biological determinants. We have sessions highlighting how future treatments may well be based on more rational target discovery and personalised medicine. This requires an understanding of the 'big data' emerging from high throughput next generation sequencing, epigenetics and the study of environmental exposures.

Advances in technology also feature in the sessions on patient based biomarker research and also clinical practice. The ability to study the disease before clinical onset is now becoming a reality due to advances in imaging and the willingness of subjects at risk of ALS/MND to engage with the research community. Telehealth and E-learning demonstrate how we can engage with clinical management in ever more flexible and creative ways.

Data is everywhere and the more we can share our knowledge and resources the greater our capacity to improve the lives of people living with MND. The annual symposium is where this sharing begins. On behalf of the Programme Committee I wish you a happy and productive meeting.

Prof Kevin Talbot

Programme Committee Chair

Programme

Wednesday 7 December 2016

The Opening Session will be busy, so please arrive promptly. Once the room capacity is reached, delegates will follow the session in an adjoining room (audio and PowerPoint only).

SESSION 1 LOCATION: THE LIFFEY B

JOINT OPENING SESSION

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

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

08.35 – 08.40
Welcome from Host Association – *Special Guest*

08.40 – 09.10
C1 Insights into the ALS/MND exposome – *R Vermeulen (The Netherlands)*

09.10 – 09.40
C2 Untangling the X-files of ALS – *R Bedlack (USA)*

09.40 – 09.55
International Alliance Humanitarian Award, International Alliance Forbes Norris Award

09.55 – 10.15
IPG Award and winner's research presentation

10.30 – 11.00 COFFEE Locations: The Forum and Level 3 Foyer

SESSION 2A LOCATION: THE LIFFEY A

RNA PROCESSING AND DYSREGULATION

Chairs: ***J Rothstein (USA) J Ule (UK)***

11.00 – 11.30
C3 Using iCLIP to study the assembly of protein-RNA complexes associated with MND – *J Ule (UK)*

11.30 – 11.50
C4 ALS and Artificial Intelligence: IBM Watson suggests novel RNA binding proteins altered in ALS – *N Bakkar (USA)*

11.50 – 12.10
C5 Matrin-3 regulates TDP-43 levels via its 3'UTR region – *E Rodriguez-Lebron (USA)*

12.10 – 12.30
C6 Muscleblind protects against transcriptomic dysregulation and neurodegeneration in FUS mediated ALS – *U Pandey (USA)*

SESSION 2B LOCATION: THE LIFFEY B

MULTIDISCIPLINARY MANAGEMENT

Chairs: ***H Mitsumoto (USA) D Oliver (UK)***

11.00 – 11.30
C7 Developing and implementing the NICE guideline on MND – *D Oliver (UK)*

11.30 – 11.50
C8 Longitudinal analysis of patient communication and treatment preferences in an ALS clinic – *Z Simmons (USA)*

11.50 – 12.10
C9 Determinants of therapeutic decision making in ALS in Germany, Sweden and Poland – *D Lulé (Germany)*

12.10 – 12.30
C10 Comparison of survival of people with ALS by diagnostic cohort – *S Martin (UK)*

12.30 – 14.00 LUNCH Locations: The Forum and Level 3 Foyer

SESSION 3A LOCATION: THE LIFFEY A

RNA AND NEURODEGENERATION

Chairs: ***E Hornstein (Israel) C Shaw (UK)***

14.00 – 14.30
C11 Vulnerability of microRNAs in FTD-ALS – *E Hornstein (Israel)*

14.30 – 14.50
C12 Transcellular spread of motor degeneration via microRNAs in genetic models of ALS – *A Parker (Canada)*

14.50 – 15.10
C13 Circular RNA biogenesis is dependent on FUS and is impaired in an ALS model system – *S Dini Modigliani (Italy)*

15.10 – 15.30
C14 Loss of TDP-43 contributes to non-coding RNA mediated toxicity – *E Lee (USA)*

SESSION 3B LOCATION: THE LIFFEY B

ALS/FTD

Chairs: ***T Bak (UK) O Hardiman (Ireland)***

14.00 – 14.30
C15 ALS/FTD as a disorder of connectivity: Why are cognitive symptoms an integral part of the ALS spectrum – *T Bak (UK)*

14.30 – 14.50
C16 Cognitive and behavioural profiles in frontotemporal dementia with and without amyotrophic lateral sclerosis – *J Saxon (UK)*

14.50 – 15.10
C17 Cognitive impairment in MNDs: Expanding from ALS to PLS & PMA – *B de Vries (The Netherlands)*

15.10 – 15.30
C18 Beyond the motor system: Exploring psychosis in ALS – *E Devenney (Australia)*

15.30 – 16.00 COFFEE Locations: The Forum and Level 3 Foyer

SESSION 4A LOCATION: THE LIFFEY A

PROTEIN MISFOLDING AND AGGREGATION

Chairs: *H Durham (USA) J Ravits (USA)*

16.00 – 16.20
C19 Proteins found in ALS inclusions are supersaturated indicating proteostasis collapse in motor neurons – *J Yerbury (Australia)*

16.20 – 16.40
C20 TDP-43 and SOD1: A toxic pas de deux in ALS – *E Pokrishevsky (Canada)*

16.40 – 17.00
C21 CCNF mutations in ALS and FTD lead to dysfunctional protein homeostasis – *I Blair (Australia)*

17.00 – 17.20
C22 Transfer of ALS protein aggregates between motor neurons in the zebrafish spinal cord – *M Morsch (Australia)*

17.20 – 17.40
C23 Modelling neuroanatomic propagation of ALS in the spinal cord – *B Drawert (USA)*

17.40 - 17.50
Late breaking news: Mutant SOD1 aggregates from human ventral horn transmit templated aggregation and fatal ALS-like disease – *S Marklund (Sweden)*

SESSION 4B LOCATION: THE LIFFEY B

MANAGEMENT OF COGNITIVE AND PSYCHOLOGICAL CHANGE

Chairs: *N Pender (Ireland) J Prudlo (Germany)*

16.00 – 16.30
C24 Cognition in ALS: Evolution, insights and key emerging trends – *N Pender (Ireland)*

16.30 – 16.50
C25 The relationship between cognition, behaviour, and disease staging in ALS – *C Crockford (UK)*

16.50 – 17.10
C26 Predictors of wellbeing in the course of one year in ALS – *C Vázquez (Germany)*

17.10 – 17.30
C27 Caregiver burden in amyotrophic lateral sclerosis: Elucidating the trajectory of psychological distress in burden – *T Burke (Ireland)*

LOCATION: THE FORUM **17.45 – 19.30**

POSTER SESSION A

Only Poster Session A posters will be on display throughout this session. The presenters of each poster theme will be available for discussion at the following times:

18.00 – 18.20
Theme 1: Epidemiology

Theme 7: Improving diagnosis and prognosis

18.20 – 18.40
Theme 5: Human cell biology and pathology

Theme 8: Imaging and electrophysiology

18.40 – 19.00
Theme 3: *In vitro* experimental models

Theme 9: Therapeutic strategies

19.00 – 19.20
Theme CW: Clinical work in progress

Theme BW: Biomedical work in progress

Thursday 8 December 2016

SESSION 5A LOCATION: THE LIFFEY A

THERAPEUTIC STRATEGIES

Chairs: *L Bruijn (USA) P Shaw (UK)*

08.30 – 08.50
C28 Designing kinase inhibitors to combat ER stress-mediated apoptosis in a stem cell model of ALS – *E Lowry (USA)*

08.50 – 09.10
C29 Modulation of UPR response in iPS cell-derived motor neurons from ALS-patients – *Y Rudhard (Germany)*

09.10 – 09.30
C30 Identification of therapeutic targets for cytoskeletal defects in ALS – *A Javaherian (USA)*

09.30 – 10.00
C31 Challenges in CNS drug discovery – *P Brennan (UK)*

SESSION 5B LOCATION: THE LIFFEY B

PRE/EARLY SYMPTOMATIC DISEASE

Chairs: *P Andersen (Sweden) M Turner (UK)*

08.30 – 09.00
C32 Detecting early changes in FTD – *J Rohrer (UK)*

09.00 – 09.20
C33 Quantitative motor testing: Biomarker of pre-symptomatic ALS? – *M Benatar (USA)*

09.20 – 09.40
C34 Cortical dysfunction is a global phenomenon in ALS – *P Menon (Australia)*

09.40 – 10.00
C35 Blood biomarkers of carbohydrate and lipid metabolism and risk of amyotrophic lateral sclerosis: A more than 20 year follow-up of the Swedish AMORIS cohort – *D Mariosa (Sweden)*

SESSION 5C LOCATION: LIFFEY HALL 2

AUTONOMY AND QUALITY OF LIFE: THE PATIENT-CARER DYAD

Chairs: *D Lulé (Germany) M Ogino (Japan)*

08.30 – 09.00
C36 Physical and psychological influences upon quality of life in motor neurone disease/ ALS – *C Young (UK)*

09.00 – 09.20
C37 Subjective perception of health in ALS: A moving target? – *N Thakore (USA)*

09.20 – 09.40
C38 Are caregivers able to correctly predict ALS patients' wish for hastened death and their well-being – *J Keller (Germany)*

09.40 – 10.00
C39 Journey to ALS diagnosis: Caregiver perspectives – *M Galvin (Ireland)*

10.00 – 10.30 COFFEE Locations: The Forum and Level 3 Foyer

SESSION 6A LOCATION: THE LIFFEY A

CELL BIOLOGY AND PATHOLOGY

Chairs: *M Hafezparast (UK) J Prehn (Ireland)*

10.30 – 11.00
C40 Angiogenin, tiRNA and vascular integrity in health and disease – *J Prehn (Ireland)*

11.00 – 11.20
C41 Apical dendrite degeneration, a new cellular pathology in amyotrophic lateral sclerosis – *H Ozdinler (USA)*

11.20 – 11.40
C42 Dyshomeostasis of copper proteins is a common feature of sporadic human MND and transgenic mouse models: Outcomes from a novel metalloproteomic analysis – *P Crouch (Australia)*

11.40 – 12.00
C43 Nuclear export inhibition of C9ORF72 repeat transcripts prevents neuronal death and associated motor deficits – *G Hautbergue (UK)*

12.00 – 12.20
C44 The DNA damage response (DDR) is induced by the C9ORF72 repeat expansion in ALS – *M Farg (Australia)*

12.20 – 12.40
C45 The RNA-binding protein, hnRNP K, forms a critical nexus between TDP-43 pathology and oxidative stress in ALS – *D Moujalled (Australia)*

SESSION 6B LOCATION: THE LIFFEY B

NUTRITIONAL MANAGEMENT AND METABOLISM

Chairs: *J-P Loeffler (France) R Tandan (USA)*

10.30 – 10.50
C46 Delineating mechanisms of dysphagia in ALS – *E Plowman (USA)*

10.50 – 11.10
C47 Eating and cognition across the amyotrophic lateral sclerosis-frontotemporal dementia spectrum: Effect on survival – *E Devenney (Australia)*

11.10 – 11.30
C48 Does percutaneous endoscopic gastrostomy lengthen survival in patients with weight loss when bulbar function is preserved? – *L Jenkins (USA)*

11.30 – 11.50
C49 A decrease in blood cholesterol after gastrostomy could impact survival in ALS – *H Blasco (France)*

11.50 – 12.10
C50 Gut appetite regulatory and metabolic hormones in ALS: Relationship to body composition, energy expenditure and survival – *E Kasarskis (USA)*

12.10 – 12.30
C51 Changes in energy metabolism in ALS are associated with alterations in glucose and fatty acid flux – *S Ngo (Australia)*

SESSION 6C LOCATION: LIFFEY HALL 2

NEUROIMAGING

Chairs: *P Bede (Ireland) J Grosskreutz (Germany)*

10.30 – 10.50
C52 Gray matter correlates of cognitive decline in ALS: A multi-atlas based MRI study – *M França Jr (Brazil)*

10.50 – 11.10
C53 Cortical profile of C9orf72 gene expression associated with cortical thinning in amyotrophic lateral sclerosis – *R Schmidt (The Netherlands)*

11.10 – 11.30
C54 Functional and structural connectivity in ALS – insights from MRI connectome analyses and TMS – *N Geevasinga (Australia)*

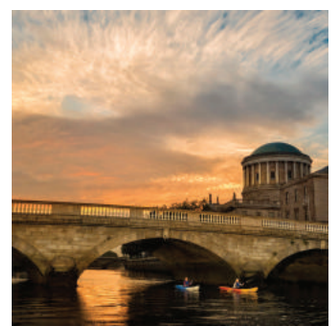
11.30 – 11.50
C55 The progression of cerebral pathology in ALS: A six-monthly multi-modal MRI study over two years – *R Menke (UK)*

11.50 – 12.10
C56 Development of an automated MRI-based diagnostic protocol based on disease-specific pathognomonic features in amyotrophic lateral sclerosis: A quantitative disease-state classification study – *C Schuster (Ireland)*

12.10 – 12.30
C57 Data-driven modelling of diffusion MRI changes in ALS indicates evolution of distal prior to proximal corticospinal tract pathology – *M Gabel (UK)*

12.30 – 14.00 LUNCH Locations: The Forum and Level 3 Foyer







SESSION 7A LOCATION: THE LIFFEY A

EPIGENETICS AND GENOMICS

Chairs: *J Kirby (UK) J Veldink (The Netherlands)*

14.00 – 14.30
C58 Epigenetic pathways to neuropsychiatric and neurological disease – *J Mill (UK)*

14.30 – 14.50
C59 Epigenetic modelling and therapeutic targeting of the expanded C9ORF72 locus – *Z Zeier (USA)*

14.50 – 15.10
C60 Changes in expression levels of homeobox genes and transthyretin in patients with C9ORF72 repeat expansions – *M Van Blitterswijk (USA)*

15.10 – 15.30
C61 A gene signature for amyotrophic lateral sclerosis associated with TDP-43 pathology – *J Cooper-Knock (UK)*

SESSION 7B LOCATION: THE LIFFEY B

SYMPTOMATIC TREATMENTS

Chairs: *O Gredal (Denmark) C Jackson (USA)*

14.00 – 14.30
C62 The CANALS study: A randomized, double-blind, placebo-controlled, multi-centre study to assess the safety and efficacy on spasticity symptoms of a Cannabis Sativa extract in motor neuron disease patients – *N Riva (Italy)*

14.30 – 14.50
C63 Aerobic exercise therapy in patients with amyotrophic lateral sclerosis (FACTS-2-ALS): A randomized clinical trial – *A van Groenestijn (The Netherlands)*

14.50 – 15.10
C64 Meditation training for people with amyotrophic lateral sclerosis: A randomized clinical trial – *F Pagnini (Italy)*

15.10 – 15.30
C65 Early treatment with NIPPV: factors affecting compliance over time – *C Jackson (USA)*

SESSION 7C LOCATION: LIFFEY HALL 2

MOUSE MODELS

Chairs: *G Nardo (Italy) F René (France)*

14.00 – 14.20
C66 Phenotypic characterization of a new CHMP2Bintron5-based transgenic mouse that develops histological and behavioural features of amyotrophic lateral sclerosis and frontotemporal dementia – *R Waegaert (France)*

14.20 – 14.40
C67 AAV9-mediated C9orf72 experimental modelling of ALS/FTD in mice – *M Azzouz (UK)*

14.40 – 15.00
C68 Degeneration of serotonin neurons is necessary to elicit spasticity in amyotrophic lateral sclerosis – *L Dupuis (France)*

15.00 – 15.15
C69 The disease modifying effects of exercise and sedentary behaviour in a mouse model of motor neurone disease – *K Jones (Canada)*

15.15 – 15.30
C70 Robust beneficial effects of a non-competitive AMPA receptor antagonist in an ALS mouse model – *M Akamatsu (Japan)*

15.30 – 16.00 COFFEE Locations: The Forum and Level 3 Foyer

SESSION 8A LOCATION: THE LIFFEY A

CLINICAL GENETICS

Chairs: *I Blair (Australia) P Corcia (France)*

16.00 – 16.30
C71 Genetic pleitropy – *D Goldstein (USA)*

16.30 – 16.50
C72 Genetic screening of 18,926 samples reveals new risk alleles for familial and sporadic ALS – *K Kenna (USA)*

16.50 – 17.10
C73 Project MinE GWAS: Genome-wide association analyses identify new risk variants and the genetic architecture of amyotrophic lateral sclerosis – *W van Rheenen (The Netherlands)*

17.10 – 17.30
C74 Shared Novel Variant Analysis Identifies Novel Genes in Familial ALS from Whole Exome Sequencing – *S Topp (UK)*

SESSION 8B LOCATION: THE LIFFEY B

TECHNOLOGY AND ALS

Chairs: *C McDermott (UK) P Wicks (USA)*

16.00 – 16.20
C75 The power of sharing data: 10 years experience with PatientsLikeMe – *P Wicks (USA)*

16.20 – 16.40
C76 Telehealth in motor neurone disease: A mixed methods, randomised controlled, pilot study of the use of the TiM telehealth system to deliver highly specialised care in motor neurone disease, at a distance – *E Hobson (UK)*

16.40 – 17.00
C77 Optimising care through telemonitoring in ventilated patients with motor neurone disease: A pilot study – *H Ando (UK)*

17.00 – 17.20
C78 E-learning for ALS health care providers – *C Roos (The Netherlands)*

17.20 – 17.40
C79 Augmentative and alternative communication for locked-in state patients – *P Fedele (Italy)*

SESSION 8C LOCATION: LIFFEY HALL 2

EVOLVING BIOMARKERS

Chairs: *M de Carvalho (Portugal) M Weber (Switzerland)*

16.00 – 16.20
C80 Tissue-enhanced proteomic analysis of plasma samples reveals new mechanistic biomarker candidates for the stratification of amyotrophic lateral sclerosis patients – *I Zubiri (UK)*

16.20 – 16.40
C81 Electrical impedance myography for early diagnosis and assessment of ALS progression: results of a multicenter clinical trial – *S Rutkove (USA)*

16.40 – 17.00
C82 MEG cortico-muscular coherence to assess corticospinal tract integrity in ALS – *M Proudfoot (UK)*

17.00 – 17.20
C83 Auditory mismatch negativity in amyotrophic lateral sclerosis – *B Nasseroleslami (Ireland)*

17.20 – 17.40
C84 Glial activation measured by [11C]-PBR28 PET correlates with 1H-MRS brain metabolites in amyotrophic lateral sclerosis – *E Ratai (USA)*

LOCATION: THE FORUM **17.45 – 19.30**

POSTER SESSION B

Only Poster Session B posters will be on display throughout this session. The presenters of each poster theme will be available for discussion at the following times:

18.00 – 18.20
Theme 4: *In vivo* experimental models

Theme 10: Cognitive and psychological assessment and support

18.20 – 18.40
Theme 2: Genetics and genomics

Theme 11: Respiratory and nutritional management

18.40 – 19.00
Theme 6: Biomarkers

Theme 12: Symptom management

19.00 – 19.20
Theme 13: Palliative care and decision making

Theme CP: Care practice

Friday 9 December 2016

SESSION 9A LOCATION: THE LIFFEY A

NEURON-GLIA INTERACTIONS

Chairs: ***L Barbeito (Uruguay) S Przedborski (USA)***

08.30 – 09.00
C85 Astrocyte toxicity in models of ALS – *S Przedborski (USA)*

09.00 – 09.20
C86 Early stage motor neurons neuroprotection via astrocytes restricted NF-kB activation – *N Ouali Alami (Germany)*

09.20 – 09.40
C87 Neuronal pathophysiology in a human iPSC model of ALS involves interplay between astrocytes and motor neurons – *A Chouhan (UK)*

09.40 – 10.00
C88 Predicting novel relationship of glia to the caudal distribution of lower motor neuron in relation to the region of clinical onset in sporadic ALS patients – *F Song (USA)*

SESSION 9B LOCATION: THE LIFFEY B

CLINICAL TRIALS

Chairs: ***M Cudkowicz (USA) J Mora (Spain)***

08.30 – 08.50
C89 Long-term safety and efficacy of Edaravone (MCI-186) for the treatment of amyotrophic lateral sclerosis (ALS) – *J Palumbo (USA)*

08.50 – 09.10
C90 Adaptive design single center phosphodiesterase type 4 (PDE-4) inhibitor-(MN-166 (Ibudilast)) phase 1b/2a clinical trial – interim-blinded analysis – behavior of creatinine as a biomarker in short clinical trials (NCT02238626) – *B Brooks (USA)*

09.10 – 09.30
C91 Rasagiline for the treatment of ALS: A randomized controlled study – *R Barohn (USA)*

09.30 – 09.45
C92 VITALITY-ALS, a Phase 3 trial of the fast skeletal muscle troponin activator, Tirasemtiv, for the potential treatment of amyotrophic lateral sclerosis (ALS): Study design and baseline characteristics – *J Shefner (USA)*

09.45 – 10.00
C93 Can pyrimethamine lower CSF SOD1 levels in familial ALS? Results from a multicenter Phase II trial – *D Lange (USA)*

10.00 – 10.30 COFFEE Locations: The Forum and Level 3 Foyer

SESSION10A LOCATION: THE LIFFEY A

NEUROINFLAMMATION

Chairs: *S Appel (USA) M Lynch (Ireland)*

10.30 – 11.00
C94 The contribution of inflammation to neurodegeneration – *M Lynch (Ireland)*

11.00 – 11.20
C95 Suppressing neuroinflammation: A key to therapy in amyotrophic lateral sclerosis – *S Appel (USA)*

11.20 – 11.40
C96 Activated immune response in the peripheral nervous system is instrumental to delay the disease progression in ALS mouse models – *G Nardo (Italy)*

11.40 – 12.00
C97 Early- and late-activated microglia show distinct localizations and exert different impacts on TDP-43 pathology in amyotrophic lateral sclerosis spinal cord – *S Hayashi (Japan)*

12.00 – 12.20
C98 Post-paralysis treatment with masitinib significantly slows disease progression in transgenic SOD1G93A rats – *L Barbeito (Uruguay)*

12.20 – 12.40
C99 An unexpected role for microglia during recovery from motor neuron disease in a new mouse model of TDP-43 proteinopathy – *K Spiller (USA)*

SESSION 10B LOCATION: THE LIFFEY B

DISEASE PROGRESSION AND PROGNOSTIC MODELLING

Chairs: *A Al-Chalabi (UK) J Rosenfeld (USA)*

10.30 – 10.45
C100 Baseline predictors of survival in a large cohort of ALS patients: The ALS COSMOS study – *P Factor-Litvak (USA)*

10.45 – 11.00
C101 Development and external validation of a prognostic model estimating survival in individual ALS patients – *H Westeneng (The Netherlands)*

11.00 – 11.15
C102 Retrospective analysis of data from a Phase III trial of Edaravone in amyotrophic lateral sclerosis (ALS) using two ALS Clinical Staging Systems – *W Agnese (USA)*

11.15 – 11.30
C103 ALSFRS-R patterns of disease onset and progression through the spine – *D Cerrato (USA)*

11.30 – 11.45
C104 Autonomic dysfunction in ALS: Sympathetic overactivity predicts velocity of disease progression – *G Mora (Italy)*

11.45 – 12.00
C105 Making sense of the ALSFRS-R using joint longitudinal and survival models of functional dimension subscores – *J Rooney (Ireland)*

12.00 – 12.15
C106 In silico block randomization of ALS patients using a machine learning algorithm – *J Berry (USA)*

12.15 – 12.30
C107 Rate of change and linearity of ALSFRS-R and its subscales in the PRO-ACT database – *N Thakore (USA)*

12.30 – 13.45 LUNCH Locations: The Forum and Level 3 Foyer

SESSION 11 LOCATION: THE LIFFEY B

JOINT CLOSING SESSION

Chairs: *T Heiman-Patterson (USA) and K Talbot (UK)*

13.45 – 14.00
C108 Airlie House Clinical Trials Guidelines Workshop update 2016 – *H Mitsumoto (USA)*

14.00 – 14.30
C109 Entering the era of precision medicine: Realising the value of MND data at scale – *W Hide (UK)*

14.30 – 15.00
C110 A precision medicine approach to ALS: What will it take? – *A Chio (Italy)*

15.00 - 15.05
Poster Prize presentation

15.05 – 15.10
Invitation to Boston 2017

15.10 – 15.20
Late breaking news: Safety, tolerability and efficacy of intrathecal autologous mesenchymal stromal cells secreting neurotrophic factors (MSC-NTF) for patients with ALS from a Phase IIa randomized double blind placebo controlled trial – *J Berry (USA)*

15.20 - 15.30
Late breaking news: A Phase II trial of arimoclomol in SOD1 ALS – *M Benatar (USA)*

Poster sessions

THEME 1

Epidemiology

P1 Nutritional Therapy Guideline for amyotrophic lateral sclerosis
Okamoto K, Egami M, Fujiwara N, Kihira T

P2 Season and time impact on ALS death: What might be the story behind it?
Pinto S, de Carvalho M

P3 Mortality rates for motor neuron disease at the state and county levels in the U.S. are associated with the use of well water
Schwartz G, Klug M, Simon I, Swartz S, Rundquist B

P4 BMAA ALS: is there a link between ALS and BMAA exposure?
Couratier P, Boumédiène F, Camu W, Lagrange E, Combès A, Ploux O, Pichon V, Méjean A, Bonneterre V, Besson G, Nicol M, Delzor A, Preux PM, Marin B

P5 Environmental risk factors for ALS/ neurodegeneration via aerosol exposure in NH, VT, and NY
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P8 Occupational formaldehyde and amyotrophic lateral sclerosis: A population-based study in the Danish registries
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P9 Military service and the risk of amyotrophic lateral sclerosis: A meta analysis
Tai H, Cui LY, Shen DCH, Cui B, Fang J, Li DW

P10 Amyotrophic lateral sclerosis and the military: A population-based study in the Danish registries
Seals R, Kioumourtzoglou M, Hansen J, Gredal O, Weisskopf M

P11 Psychiatric and neurodegenerative diseases among patients with amyotrophic lateral sclerosis and their families
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Heverin M, Vajda A, Hardiman O

P13 Age of onset differentially influences the progression of regional dysfunction in sporadic amyotrophic lateral sclerosis
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P14 Handedness and side of onset in limb-onset ALS: Is there a connection?
Pioro E, Thakore N

P15 Effects of sex and family history on the amyotrophic lateral sclerosis (ALS) multistep model
Siu J, Perkins E, Cashman N

P16 Phenotypic characterization and clinical course of late and early disease onset in ALS patients
Garcia Molina E, Espinosa T, Dominguez R, Turon J, Povedano M, Paipa Merchan A

P17 Secular trends of ALS incidence in an Italian population-based register, 1995-2014, Is there a cohort effect?
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P18 Mortality trends of amyotrophic lateral sclerosis in Norway 1951-2014: An age-period-cohort study
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P19 Amyotrophic lateral sclerosis incidence and cluster identification in New Brunswick, Canada, over a 10-year period
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P20 Prevalence of amyotrophic lateral sclerosis (ALS) in the United States, 2012-2013
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P21 Incidence of motor neurone disease in the Scottish population: A 25 year perspective
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P22 Co-morbidities in people with motor neurone disease/ALS
Sangheli A, Mills RJ, Young CA, on behalf of TONiC group

P23 The World Health Organisation disability assessment scale in the measurement of activity and participation in motor neurone disease/ALS
James E, Tennant A, Young C, on behalf of TONiC group

P24 Rates of decline in functional parameters and survival in ALS patients
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P25 An examination of baseline factors predictive of patient completion status in ALS clinical trials
Liu D, Ferguson TA, Han S, Lindborg SR, Johns DR

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Genetics and Genomics

P26 Hidden Treasures: Hunting for cryptic splicing resulting from the knockdown of ALS-associated RNA binding protein TDP-43
Humphrey J, Emmett W, Fratta P, Isaacs A, Plagnol V

P27 Roles of non coding RNA in mutated and non mutated ALS patients
Gagliardi S, Zucca S, Pansarasa O, Diamanti L, Bordoni M, Sproviero D, Ceroni M, Cereda C

P28 Epigenetic study in amyotrophic lateral sclerosis/parkinsonism-dementia complex, Kii, Japan
Kokubo Y, Mano T, Morimoto S, Kuzuhara S, Iwata A

P29 Characterization of methylomic changes in ALS
Ruf W, Hannon E, Freischmidt A, Brenner D, Ludolph A, Mill J, Weishaupt J

P30 Trans-ethnic methylome-wide association analysis of ALS and its clinical phenotypes
Benyamin B, He J, Shah S, McRae A, Robinson M, Gratten J, Henders A, Liu Z, Garton F, Mangelsdorf M, Sachdev P, Mather K, Wright M, Xu H, Bartlett P, Brown M, Visscher P, Henderson R, McCombe P, Fan D, Wray N

P31 Integrated analyses of exome and methylation genomic data sets for insight into the etiology of sALS
Garton FC, Benyamin B, Zhao Q, Liu Z, Gratten J, Henders AK, Zhang Z-H, McRae AF, Mathers K, Sachdev PS, Robinson M, Shah S, Mangelsdorf M, Brown MA, Visscher PM, Henderson R, Wray NR, McCombe P

P32 A target Next Generation Sequencing approach to clarify the role of genetic variants in ALS pathogenesis
Marangi G, Lattante S, Doronzio PN, Conte A, Patanella K, Zollino M, Sabatelli M

P33 Latent cluster analysis of ALS phenotypes and GWAS: Identification of prognostically differing groups
Sproviero W, Shatunov A, Stahl D, van Rheenen W, Jones AR, Van Damme P, Robberecht W, McLaughlin RL, Hardiman O, Veldink JH, van den Berg LH, Al-Chalabi A

P34 Project MinE: Study design and pilot analyses of a large-scale whole genome sequencing study in amyotrophic lateral sclerosis
van Rheenen W, Pulit SL, van den Berg LH, Veldink JH

P35 Genetic epidemiology of amyotrophic lateral sclerosis: a systematic review and meta-analysis
Zou Z, Che C, Liu C, He R, Huang H, Cui L

P36 Novel genetic mutations in amyotrophic lateral sclerosis identified by Next Generation Sequencing (NGS) analysis of a French cohort of patients
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P37 Genetic analyses of patients with familial and sporadic amyotrophic lateral sclerosis in a Brazilian research center
Chadi G, Maximino JR, Jorge FMH, Borba FC, Gilio JM, Callegaro D, Lopes CG, Santos SN, Rebelo GNS

P38 Targeted, high-throughput sequencing of motor neurone disease genes in a Scottish cohort
Black H, Leighton D, Cleary E, Rose E, Stephenson L, Colville S, Gorrie G, Davenport R, Ross D, Warner J, Porteous M, Swingler R, Goldstein D, Pal S, Aitman T, Chandran S

P39 Screening for TBK1 mutations in a large cohort of UK ALS cases
Weinreich M, Wyles M, Heath P, Kirby J, Shaw P

P40 Mutational analysis of TBK1 in ALS patients in Taiwan
Lee YC, Tsai P-C

P41 Frequency of C9orf72 expansions in Brazilian patients with amyotrophic lateral sclerosis and frontotemporal dementia
Cintra V, Bonadia L, Andrade H, Albuquerque M, Oliveira D, Claudino R, Gonçalves MV, Dourado Jr ME, Tumas V, Oliveira A, Marques Jr W, França Jr M

P42 MATR3 mutation analysis in a Chinese cohort with sporadic amyotrophic lateral sclerosis
Xu L, Li J, Fan D

P43 Two new risk loci for sporadic ALS in the Han chinese population
Xu L, Li J, Tian D, Fan D

P44 SOD1 mutations are the most common in Han Chinese populations with amyotrophic lateral sclerosis
Wei QQ, Zhou QQ, Chen Y, Ou R, Cao B, Xu Y, Yang J, Chen X, Shang H

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P46 H46R SOD1 mutation is consistently associated with a relatively benign form of amyotrophic lateral sclerosis with very slow progression
Zou Z, Liu M, Li X, Cui L

P47 Common polymorphisms of the CX3CR1 gene are modifiers of ALS outcomes: A population-based study
Calvo A, Canosa A, Moglia C, Brunetti M, Barberis M, Traynor B, Mora G, Chio A

P48 The HFE His63Asp polymorphism is a modifier of ALS outcomes in Italian and French patients with SOD1 mutations
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P49 Association analysis of polymorphisms in the VMAT2 and TMEMB106B genes in Parkinson's disease, amyotrophic lateral sclerosis and multiple system atrophy in Chinese populations
Chen Y, Wei Q, Ou R, Cao B, Shang H

P50 Novel mutation in the Vesicle-Trafficking Protein VAPB of one Chinese familial amyotrophic lateral sclerosis patient
Chen Y, Dong Y, Sun YM, Lu JH, Wu JJ

P51 Mutations in FUS are the most frequent genetic cause in juvenile sporadic ALS patients of Chinese origin
Zou Z, Liu M, Li X, Cui L

P52 FUS mutations of familial amyotrophic lateral sclerosis patients in east China and their clinical characteristics
Sun YM, Zhang Y, Dong Y, Jiang YP, Lu JH, Wu JJ, Chen Y

P53 A novel Optineurin truncation mutation identified in a consanguineous Palestinian family with Amyotrophic lateral sclerosis confirms loss of function as a disease mechanism
Gotkine M, de Majo M, Wong CH, Topp S, Michaelson-Cohen R, Epsztejn-Litman S, Eigess R, Nishimura A, Smith B, Shaw C

P54 OPTN 691_692insAG is a founder mutation causing recessive ALS and increased risk in heterozygotes
Goldstein O, Nayshool O, Nefussy B, Vainer B, Traynor BJ, Renton AE, Gana-Weisz M, Drory VE, Orr-Urtreger A

THEME 3

In Vitro Experimental Models

P55 A cellular model of ALS with SQSTM1 mutations exhibits autophagy defects; a new platform for evaluating genetic interactions and drug screening
Goode A, Butler K, Scott D, Long J, Cavey J, Shaw B, Gell C, Johannsen T, Oldham N, Searle M, Layfield R

P56 Alteration of oligomeric states and subcellular localization of ALS2 mutants underlie the pathogenesis of ALS2-linked motor neuron diseases
Sato K, Suzuki-Utsunomiya K, Hiratsuka Y, Ono S, Otomo A, Hadano S

P57 An optical method for detecting endoplasmic reticulum and mitochondrial associated membranes
Harmon M, Skehel P

P58 Mutant Cyclin F inhibits endoplasmic reticulum (ER)-associated degradation (ERAD), ER-Golgi trafficking and autophagy, perturbing ER proteostasis and inducing toxicity in ALS
Sundaramoorthy V, Raganin A, Williams K, Yang S, Shahheydari H, Blair I, Atkin J

P59 Primary motor neurons from a novel TDP-43-associated ALS mouse as a platform for high throughput screening.
Gordon D, Dafinca R, Farrimond L, Alegre-Abarrategui J, Davies B, Ansorge O, Wade-Martins R, Talbot K

P60 Analysis of SUMOylation as a post-translational modification of TDP-43 protein
Maraschi AM, Gumina V, Colombrita C, Feligioni M, Silani V, Ratti A

P61 Impaired stress granule dynamics in primary motor neurons from a symptomatic TDP-43M337V transgenic mouse
Farrimond L, Gordon D, Dafinca R, Davies B, Alegre-Abarrategui J, Ansorge O, Wade-Martins R, Talbot K

P62 Oxidative stress in patient-derived ALS astrocytes and therapeutic approaches
Al Mashhadi S, Myszczynska MA, Stopford M, Shaw PJ, Ferraiuolo L

P63 The role of low complexity domain mutations in RNA-binding proteins associated with motor neuron disease pathogenesis
Hallegger M, Huppertz I, Zagalak J, Haberman N, Ule J

P64 Decoding the non-coding side of FUS-ALS
Biscarini S, Capauto D, Lu L, Colantoni A, Peruzzi G, Caffarelli E, Shneider N, Laneve P, Bozzoni I

P65 HuD regulation of SOD1 and FUS mRNAs in sporadic ALS.
Dell'Orco M, Gardiner AS, Cereda C, Perrone-Bizzozero NI

P66 Impact of interferon-gamma on neurotoxicity and ER-mitochondria coupling cycle in ALS
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P66a Tryptophan-32 of SOD1 is an aggregation modulating residue
McAlary L, Aquilina A, Yerbury J

P67 Investigating non-cell autonomous effects on metabolism in ALS through metabolomic analysis of astrocyte-neuron co-cultures
Valbuena G, Tortarolo M, Cantoni L, Bendotti C, Keun H

P68 Metabolic influence of glutamate exposure and SOD1 mutation in astrocytes using a metabolomics approach
Madji Hounoum B, Raoul C, Coque E, Patin F, Vourc'h P, Marouillat S, Cherpi-Antar C, Nadal-Desbarats L, Emond P, Andres CR, Corcia P, Mavel S, Blasco H

P69 In vivo and in vitro characterization of SOD1 in early stages of ALS as a precursor to insoluble aggregates
Tokuda E, Anzai I, Nomura T, Ohara S, Watanabe S, Yamanaka K, Morisaki Y, Misawa H, Furukawa Y

P70 A GFP-fusion library screen reveals responses in the proteostasis network to mutant SOD1
Lambert-Smith I, Saunders D, Oliver S, Yerbury J, Favrin G

P71 Role of MCU in a SOD1 model of ALS
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P72 Role of the mitochondrial Na/Ca/Li-exchanger (NCLX) in the pathophysiology of ALS
Le TT, Keiner S, Tadic V, Sengupta S, Malci A, Stubendorff B, Witte OW, Prell T, Grosskreutz J

P73 POSTER WITHDRAWN

P74 C9orf72 iPSC-derived motor neurons show functional deficits in calcium buffering
Dafinca R, Barbagallo P, Ababneh N, Scaber J, Turner MR, Cowley S, Talbot K

P75 Translating ribosome affinity purification from C9orf72-ALS/FTD patient-derived iPS Motor Neurons
Sathyaprakash C, Varela MA, Ababneh N, Wood MJA, Dafinca R, Talbot K

P76 Investigating the role of C9ORF72 in autophagy using human iPS-derived motor neurons from ALS/FTD patients
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P77 The C9orf72 protein interacts with Rab1a and the ULK1 complex to regulate initiation of autophagy
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P78 Intranuclear (G4C2)n RNA foci induce formation of paraspeckle-like structures
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P79 C9orf72 DPRs undergo liquid-liquid phase separations and perturb RNA granule metabolism
Boeynaems S, Bogaert E, Van Damme P, Robberecht W, Van Den Bosch L

P80 Screening ALS patient CSF toxicity to spinal motor neurons derived from induced pluripotent stem cells
Lau CL, Weston RH, Talman P, Turner BJ

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In Vivo Experimental Models

P81 Validation of metabotropic glutamate receptor type 5 as a therapeutic target in MND
Brown-Wright H, Bennett K, Brown A, Shaw P, Mead R

P82 A puzzling case of hyperexcitability – the region-specific involvement of inhibitory interneurons in both the SOD1 mouse and amyotrophic lateral sclerosis patients
Clark R, Blizzard C, Young K, King A, McLean C, Dickson T

P83 Motor-unit dependent alterations of neuromuscular junction and muscle function in an ALS mouse model
Tremblay E, Robitaille R

P84 Characterizing the microenvironment surrounding microglia and the degenerating motor neuron in a zebrafish model of amyotrophic lateral sclerosis
Morrice JR, Gregory-Evans CY, Shaw CA

P85 Inhibitory synaptic transmission and KCC2 expression in the motor cortex of pre-symptomatic ALS mice
Khademullah SC, Woodin MA

P86 Impairment of growth hormone signalling significantly delays the onset of hind-limb weakness in a mouse model of ALS
Steyn F, Lee K, Noakes P, Waters M, McCombe P, Ngo S

P87 Unravelling the molecular mechanisms behind corticospinal motor neuron degeneration in ALS
Marques C, Rouaux C

P88 Sensory neuropathy in pmn mice is associated with defects in microtubule polymerization and microtubule-dependent axonal transport
Schäfer M, Bellouze S, Jacquier A, Schaller S, Richard L, Mathis S, Vallat JM, Haase G

P89 Cellular and molecular analysis of corticospinal motor neurons that become vulnerable due to hTDP-43A315T mutation
Gautam M, Laboissonniere L, Kandpal M, Jara J, Bigio Y, Trimarchi J, Davuluri R, Ozdinler H

P90 The low complexity domains in FUS are pivotal for toxicity of human FUS in drosophila motor neurons
Bogaert E, Steyaert J, Boeynaems S, Scheveneels W, Van Damme P, Callaerts P, Robberecht W, Van Den Bosch L

P91 Novel ALS-FUS mouse model associated with the P525L mutation develops progressive FUS pathology in an age and expression-dependent manner consistent with human disease
Nolan M, Vizard T, Talbot K, Ansorge O

P92 Analyzing changes in vascular integrity across disease progression in SOD1G93A mice and FUS (1-359) mice
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P93 Using a novel FUS knock-in mouse with a frameshift mutation to identify early disease processes in FUS-ALS
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P94 Partial cytoplasmic mislocalization of truncated FUS leads to cell autonomous late onset motor neuron degeneration
Scekic-Zahirovic J, El Oussini H, Dieterlé S, Dirrig-Grosch S, René F, Storkebaum E, Lagier-Tourenne C, Dupuis L

P95 Systemic delivery of Riluzole does not delay disease onset or increase lifespan in FUS (1-359) or TDP-43A315T mice
Coughlan K, Halang L, Hogg M, Prehn JHM

P96 Investigating effects of TDP-43 on metabolic gene expression in a drosophila model of amyotrophic lateral sclerosis
Barrows J, Manzo E, Joardar A, Coyne A, Zarnescu D

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P98 PI3 kinase activation alleviates TDP-43-induced axonopathy in the spinal motor neuron in zebrafish
Asakawa K, Kawakami K

P99 TDP-43 mediated synaptic alterations in the pathogenesis of TDP-43 proteinopathies
Blizzard C, Handley E, Jiang T, Pitman K, Dawkins E, Young K, Clark R, Turner B, Dickson T

P100 The pre-symptomatic transcriptional profile of TDP-43 M337V BAC transgenic mice reveals early pathophysiological pathways
Scaber J, Gordon D, Dafinca R, Alegre-Abarrategui J, Riancho J, Wade-Martins R, Sims D, Heger A, Talbot K

P101 Investigating dysfunctional RNA processing in TDP-43 mouse mutants
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P102 Progranulin is protective against TDP-43(A315T) mediated neurodegeneration
Herdewyn S, Beel S, Van Den Bosch L, Robberecht W, Van Damme P

P103 Spinal cord organotypic slice cultures recapitulate multiple aspects of TDP-43 transgenic mouse pathology
Mitchell J, Rota S, Shaw C

P104 Evaluating novel and established therapeutic interventions in a TDP-43 mouse model
Mueller S, Stevens E, Patel R, Mitchell Ja, Shaw C

P105 Traumatic brain injury and motor neurone disease - the role and treatment of pathological TDP-43
Wright D, Tan X, Bird S, O'Brien T, Turner B, Shultz S

P106 The life span and motor activity is affected by lipoic acid in a drosophila model of ALS based on SOD1
Wang T, Cheng J, Ren M, Feng H

P107 Disruption of mitochondria-associated membrane is a common pathomechanism both in SOD1- and SIGMAR1-linked ALS
Watanabe S, Komine O, Endo F, Jin S, Yamanaka K

P108 Stathmin 1/2-triggered microtubule loss mediates Golgi fragmentation in mutant SOD1 motor neurons
Bellouze S, Baillat G, Buttigieg D, Delagrange P, Rabouille C, Haase G

P109 Telomere length dynamics and telomerase activity in the brain and spinal cord of diseased hSOD1G93A mutant mice
Ain Q, Schmeer C, Bondeva T, Grosskreutz J, Witte OW, Kretz A

P110 Molecular cues for upstream regulation of cell cycle-related neuronal death in the hSOD1G93A mouse model of amyotrophic lateral sclerosis
Penndorf D, Tadic V, Le TT, Stubendorff B, Keiner S, Muckova P, Rhode H, Witte OW, Grosskreutz J, Kretz A

P111 Endogenous copper in the central nervous system fails to satiate the elevated requirement for copper in a mutant SOD1 mouse model of amyotrophic lateral sclerosis
Hilton J, White A, Crouch P

P112 Changes in AQP4 expression and polarization in the course of motor neuron degeneration in SOD1G93A mice
Dai J, Zheng M, Liu Q, He B, Luo C, Lu X, Pei Z, Su H, Yao X

P113 Two superoxide dismutase prion strains transmit ALS in vivo
Ekhtiari Bidhendi E, Bergh J, Zetterström P, Andersen PM, Marklund S, Brännström T

P114 The hSOD1G93A transgenic swine as a large-animal model for studying ALS
Crociara P, Chieppa MN, Berrone E, Grifoni S, Pintore MD, Bendotti C, Bonetto V, Botter A, Formicola D, Rainoldi A, D'Angelo A, Perona G, Duchi R, Galli C, Meli F, Peverali FA, Vezzoni P, Paulis M, Casalone C, Corona C

P115 Systemic overexpression of SQSTM1 accelerates age of disease onset and reduces survival in SOD1H46R mice
Mitsui S, Otomo A, Nozaki M, Ono S, Sato K, Shirakawa R, Adachi H, Aoki M, Sobue G, Shang HF, Hadano S

P116 A role for androgen receptor in modulating disease progression in ALS
McLeod V, Lau C, Sheean R, Boon WC, Turner B

P117 tiRNAs generated by the ALS-associated ribonuclease angiogenin are elevated early in disease in ALS mouse models
Hogg M, Rayner M, Crivello M, Monsefi N, Susdalsew S, Prehn JHM

P118 Neuregulin 1 confers neuroprotection in SOD1-linked ALS mice via restoration of C-boutons of spinal motor neurons
Komine O, Lasiene J, Fujimori-Tonou N, Powers B, Endo F, Watanabe S, Jin S, Ravits J, Horner P, Misawa H, Yamanaka K

P119 Neuregulin-1-ErbB signaling module is associated with afferent C-type cholinergic terminals on ALS vulnerable motoneurons and involved in motoneuron diseases
Casanovas A, Salvany S, Sabater R, Tarabal O, Lahoz V, Piedrafita L, Hernández S, Calderó J, Esquerda J

P120 The interaction of the environmental neurotoxin BMAA (Beta-Methylamino-L-Alanine) with mutant SOD1 in a zebrafish model of amyotrophic lateral sclerosis
Sher R, Powers S, Kwok S, Lavin T

P121 Zebrafish C9orf72 loss-of-function models of amyotrophic lateral sclerosis and frontotemporal dementia
Rounding N, De Vos K, Grierson A

P122 The most prevalent genetic cause of ALS-FTD, C9orf72 synergizes the toxicity of ATXN2 intermediate polyglutamine repeats through the autophagy pathway
Sellier C, Campanari ML, Ciura S, Charlet-Berguerand N, Kabashi E

P123 Motor phenotype and muscle pathology of novel Matrin 3 transgenic mice
Moloney C, Rayaprolu S, Howard J, Fromholt S, Cabrera M, Siemienski Z, Miller D, Borchelt D, Lewis J

P124 Heterogeneity of Matrin-3 expression in the developing and aging murine central nervous system
Rayaprolu S, D'Alton S, Howard J, Moloney C, Duffy C, Cabrera M, Siemienski Z, Rosen Hernandex A, Crosby K, Borchelt D, Lewis J

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P126 The protective function of the oxidation resistance 1 gene in ALS
Williamson M, Gordon D, Talbot K, Oliver P, Davies K

P127 Chondrolectin in motor axon development and models of motor neuron disease in zebrafish
Smith H, Wehner D, Becker T, Becker CG

P128 Immunogenes provide targeted delivery of SMN to spinal motor neurons in SmnΔ7 mice
Sheean R, Smith K, Rogers ML, Turner B

P129 Novel spinal muscular atrophy (SMA) drosophila models reveal an essential neuromuscular function for the gemin associates of the survival motor neuron (SMN) protein
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Human Cell Biology and Pathology

P130 Mutations in a new ALS/FTD gene, CCNF, uncovers new mechanisms of Lys48-ubiquitylation regulation by the Skp-Cul-F-Box(Cyclin F) (SCF(CyclinF)) E3 ligase complex
Lee A, Rayner S, Gwee S, Sundaramoorthy V, Morsch M, Radford R, Yang S, Williams K, Hogan A, Don E, Cole N, Blair I, Atkin J, Molloy M, Chung R

P131 Investigating the role of cyclin F in ALS disease pathology
Rayner S, Lee A, Williams K, Blair I, Molloy M, Chung R

P132 Characterization of neuronal toxicity in amyotrophic lateral sclerosis
Dangoumau A, Quoibion A, Durcan T, Chen C, Dion P, Rouleau G

P133 CRISPR/Cas9 mediated gene correction of C9orf72 mutation reveals motor neuron vulnerability to AMPAR-mediated excitotoxicity
Selvaraj BT, Livesey MR, Zhao C, James OT, Cleary E, Perkins E, Lillico SG, Lee Y, Shaw CE, Whitelaw CBA, Wilmut I, Hardingham GE, Wyllie DJA, Chandran S

P134 C9ORF72 repeat expansions cause axonal transport defects in iPSC-derived motor neurons
Fumagalli L, Guo W, Fazal R, Swijsen A, Debray S, Bohl D, Boesmans W, Robberecht W, Koch P, Vanden Berghe P, Van Den Bosch L, Verfaillie C, Van Damme P

P135 Characterization of the TDP-43 splicing target TNIK in neuronal differentiation
Gumina V, Colombrita C, Maraschi A, Buratti E, Baralle FE, Silani V, Ratti A

P136 ALS-causing missense mutations of CHCHD10 affect protein structure and stability
Brockmann SJ, Freischmidt A, Ponna SK, Reinders J, Ludolph AC, Kursula P, Weishaupt JH

P137 ALS Associated Mutations in Matrin 3 Alter Protein-Protein Interactions
Boehringer A, Garcia K, Bakkar N, Pirrotte P, Bowser R

P138 Cytoplasmically mislocalised FUS expressed from the endogenous CRISPR/Cas9-modified gene triggers spontaneous assembly of FUS granules in cultured human cells
An H, Shelkovnikova T, Buchman V

P139 Serum microRNA-profiles implicate new RNA-binding proteins in ALS
Freischmidt A, Simbuerger JMB, Reinders J, Ludolph AC, Weishaupt JH

P140 Rab1 reverses both autophagy dysfunction and ER-Golgi trafficking defects in ALS
Shahheydari H, Soo KY, Halloran M, Sundaramoorthy V, Parakh S, Southam KA, McLean CA, Farg MA, Atkin JD

P141 The role of specific PDI family members in protection against ALS-like cellular pathologies
Parakh S, Perri E, Sundaramoorthy V, Walker A, Yang S, Thomas C, Blair I, Spencer D, Atkin J

P142 The nuclear pore complex is compromised in ALS
Grima JC, Daigle JG, Zhang K, Pham JT, Chew J, Zhang Y, Matlock AD, Dardov VJ, Elrick MJ, Glatzer JC, Huo Y, Richard JP, Ostrow L, Maragakis NJ, Donnelly CJ, Van Eyk J, Petrucelli L, Lloyd TE, Rothstein JD

P143 Glucosylceramide and glycosphingolipids are part of the response to motor unit stress in ALS
Henriques A, Huebecker M, Blasco H, Andres C, Laguna YAE, Corcia P, Platt F, Priestman D, Spedding M, Loeffler JP

P144 Mechanisms eliminating stress granules by autophagy: Implications for amyotrophic lateral sclerosis
Chitiprolu M, Guo H, Gibbings D

P145 The TGF-ß system as an important mediator in the disease progression of ALS
Peters S, Küspert S, Zitzelsperger E, Heydn R, Bruun TH, Bogdahn U

P146 Impaired activation of ALS monocytes by exosomes
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P147 Blood-CSF barrier disruptions in ALS
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P148 Synapse loss: An underlying correlate of cognitive decline in amyotrophic lateral sclerosis?
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P149 Neuronal senescence as a contributor to neurodegeneration
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P150 A proteomic perspective: Amyotrophic lateral sclerosis and frontotemporal dementia disease overlap
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P151 Determining the composition of FTLD inclusions by spatially targeted optical micro-proteomics (STOMP)
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P152 Functional analysis of miR-1234-3p and miR-1825
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P153 ErbB4, a causative gene product of familial ALS (ALS19), accumulates in the neurons and oligodendrocytes in patients with frontotemporal dementia
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P154 Investigating the histopathological signature of bulbar-onset ALS
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P155 Human mutations help connect genes to pathways and networks, and offer a mechanistic insight for selective motor neuron vulnerability
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P156 Selective motor neurone vulnerability in SMA
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P157 A DYNC1H1 mutation in autosomal dominant spinal muscular atrophy shows the potential of pharmacological inhibition of histone deacetylase 6 as a treatment for disease associated cellular phenotypes
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P158 Histopathological findings in an adult Down syndrome patient presenting with ALS
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P159 IBM Watson uses artificial intelligence to suggest additional prion domain containing proteins linked to ALS
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P160 Mechanisms of toxicity of cyanobacterial toxins implicated in sporadic ALS
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P161 A multidisciplinary study of sALS in patients originating from a restricted geographical area
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P162 Answer ALS: Establishing a clinical and comprehensive multi-omics signature for ALS employing induced pluripotent stem cell derived motor neurons from 1000 sporadic and familial ALS patients nationwide
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P163 Neurofilament in CSF as a diagnostic biomarker in motor neuron disease: a meta-analysis
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P164 Covariance patterns between distinct biomarkers and their impact on clinical outcome in ALS
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P165 Whole CSF proteome analysis for the identification of specific biomarkers in ALS
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P166 The CSF extracellular vesicle proteome as a novel biomarker source
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P167 Evidence of defective cholesterol metabolism in ALS
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P168 Changes in cerebrospinal fluid cytokine levels across different clinical disease milestones in amyotrophic lateral sclerosis
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P169 Oxidation-reduction potential of cerebrospinal fluid as a potential biomarker for ALS progression
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P170 Microvesicles and exosomes as new biomarkers of disease propagation in amyotrophic lateral sclerosis
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P171 Using biomarkers in blood and CSF for diagnosis and prognosis in ALS
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P172 Peripheral nerve atrophy and progranulin interact to predict longitudinal clinical performance and survival in ALS
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P173 Brain derived proteins in plasma from ALS endophenotypes
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P174 Aberration of miRNAs Expression in leukocytes from sporadic amyotrophic lateral sclerosis
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P175 Serum and lymphocyte microRNAs in ALS: Their role as functional biomarkers of the disease
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P176 Gene expression biomarkers in lymphocytes of sALS patients
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P177 Macrophage migration inhibitory factor levels as a biomarker in symptomatic ALS
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P178 Monocytes as prognostic biomarkers of longevity in transgenic SOD1G93A mice
Gasco S, Rando A, Moreno Martínez L, de la Torre M, Moreno García L, Toivonen J, Atencia Cibreiro G, Zaragoza P, Gracía Redondo A, Calvo AC, Osta R

P179 Disease progression in SBMA: Is serum creatinine a reliable biomarker?
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P182 Prediction of outcome and monitoring of clinical course by laboratory investigations
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P184 Evaluation of orofacial musculature fatigue as a clinical marker in patients with bulbar motor neuron disease
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P185 Onset type and consequent health status in MND/ALS
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P186 Quantitative labial, tongue speech and swallowing rate measurements at diagnosis correlate with ALS Functional Rating Scale – revised (ALSFRS-R) bulbar sub-score and bulbar sub-score item scores but not with ALSFRS-R total score – inter-rater reliability – pre-post nuedexta effects on speech and swallowing
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P187 Longitudinal natural history of orofacial muscle strength changes in amyotrophic lateral sclerosis patients
Brooks BR, Wright A, Bravver EK, Bockenek WL, Sanjak M, Lindblom SS

P188 Perceptual, instrumental, and self-detection of early bulbar changes in ALS
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P189 The assessment of bulbar function in ALS
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P190 The latent structure underlying the ALSFRS-R: A cross-sectional study
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P191 An examination of longitudinal changes in individual items of ALSFRS-R
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P192 Assessing the utility of diagnostic delay to predict ALSFRS-R decline in people diagnosed with ALS
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P193 The spreading of symptoms at diagnosis in ALS is a marker of prognosis: A population-based study
Manera U, Canosa A, Calvo A, Moglia C, Cammarosano S, Ilardi A, Cugnasco P, Bertuzzo D, Solero L, Bersano E, Pisano F, Mora G, Mazzini L, Chiò A

P194 Phenotype heterogeneity and ALS functional impairment at diagnosis: consequences for clinical trials enrolment
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P195 Global collaborations, patient centricity and BIG data in ALS
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P196 ALS in a post-PRO-ACT era: Pooled resource open-access ALS clinical research (PRO-ACE) database
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P197 ALS resistance is regional and not explained by demographics, medications or labs
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P198 Improving ALS predictive models for the design and conduct of clinical trials
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P199 Using historically controlled trials in treatment development for ALS
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P200 Monitoring amyotrophic lateral sclerosis disease progression with plasma creatinine levels
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P201 Predicting disease progression for ALS clinic patients
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P202 In silico stratification of ALS patients using machine learning algorithms
Taylor A, Jahandideh S, Keymer M, Ennist D

P203 Machine learning model for the prediction of slow vital capacity
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P206 A population disease progression model for amyotrophic lateral sclerosis: Results of the Treeway Summer Challenge 2015
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P207 Evaluation of an ALS staging system in a US population
Dey S, Mareck R, Deboo A, Alexander G, Heiman-Patterson T

P208 An assessment of treatment guidelines, clinical practices, demographics, and progression of disease among individuals with amyotrophic lateral sclerosis in Japan and the United States
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P209 A model-based adjustment method for the analysis of longitudinal muscle strength data in ALS
Liu D, Atassi N, Ferguson TA, Cedarbaum JM, Han S, Lindborg SR, Johns DR

P210 Magnifying movement: The use of Eulerian Video Magnification to enhance detection of muscle fasciculations in ALS
van Hillegondsberg L, Carr JA, Brey N, Henning F

P210a Mexiletine for the treatment of muscle cramps in ALS: A randomized double-blind crossover trial
Oskarsson B, Moore D, Mozaffar T, Ravits J, Wideau-Pazos M, Parziale N, Joyce N, Mandeville R, Goyal N, Cudkowicz M, Weiss M, Miller R, McDonald C

P211 Understanding cramps and fasciculations
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P212 Extrapyramidal signs in ALS patients: A prospective survey
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P213 Receiving the diagnosis of motor neurone disease (MND): Qualitative data from an Australian survey
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P214 Ultrasound of peripheral nerve in amyotrophic lateral sclerosis and healthy controls
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P215 Quantitative ultrasound of the tongue: A potential biomarker of bulbar dysfunction in ALS?
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P216 Neuroretinal involvement of ALS, assessed with optical coherence tomography (OCT)
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P217 7 Tesla diffusion tensor imaging of ex-vivo ALS brains and pathological correlates
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P218 Imaging muscle denervation in motor neuron disease using whole-body MRI
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P219 The Canadian ALS Neuroimaging Consortium (CALSNIC)
Kalra S, Mah D, Beaulieu C, Briemberg H, Dionne A, Dupre N, Eurich D, Frayne R, Genge A, Graham S, Hanstock C, Keith J, Korngut L, Lee A, Lu JQ, Shoesmith C, Wilman A, Yunusova Y, Zinman L

P220 The association of motor symptom development and thickness of functional regions within the motor cortex in patients with amyotrophic lateral sclerosis
Nitert AD, Walhout R, Westeneng HJ, Tan HHG, Hendrikse J, Veldink JH, van den Heuvel MP, van den Berg LH

P221 Foramen magnum cord area and disability in ALS: A pilot study
Caponnetto C, Roccatagliata L, Scialò C, Bonzano L, Cordano C, Cabona C, Inglese M, Mancardi GL, Pardini M

P222 Neurite orientation dispersion and density imaging (NODDI) indices correlate with clinical markers of disease severity in amyotrophic lateral sclerosis (ALS)
Broad R, Gabel MC, Dowell N, Zhang G, Alexander DC, Cercignani M, Leigh PN

P223 New insights into amyotrophic lateral sclerosis using quantitative magnetization transfer (qMT)
Broad R, Emsley E, Dowell N, Gabel MC, Cercignani M, Leigh PN

P224 Effects of motor neuron disease progression on cortical beta rhythms: A single case study of amyotrophic lateral sclerosis using magnetoencephalography
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P225 Brain sodium MRI depicts upper motor neuron involvement in amyotrophic lateral sclerosis
Grapperon AM, Maarouf A, Verschueren A, Soulier E, Confort-Gouny S, Ranjeva JP, Guye M, Attarian S, Zaaraoui W

P226 Altered functional connectivity in young-onset amyotrophic lateral sclerosis patients with early stage: a resting-state fMRI study
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P227 Selective white matter vulnerability in ALS: Implications for diagnostic classification
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P228 Prominent brain MRI white matter signal changes in an ALS patient
Ross M, Burge M, Dalrymple J

P229 Susceptibility-weighted imaging as a potential biomarker in assessing whole brain gray matter damage in amyotrophic lateral sclerosis
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P230 Loss of tract integrity in amyotrophic lateral sclerosis: A longitudinal evaluation using MR diffusion tensor imaging
ALruwaili A, Pannek K, Henderson R, Gray M, Kurniawan N, McCombe P

P231 Value of transcranial brain stem sonography in the diagnosis and prognosis of amyotrophic lateral sclerosis
Roediger A, Günther A, Prell T, Ringer TM, Gunkel A, Witte OW, Grosskreutz J

P232 Postural instability in ALS is linked to cortico-basal ganglia and brainstem involvement
Pradat PF, Couillandre A, Feron M, Termoz N, Mseddi E, Welter ML, de Marco G

P233 Spinal cord multi-modal MRI for survival prediction in ALS
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P234 Increased in vivo glial activation in patients with primary lateral sclerosis (PLS) assessed with [11C]-PBR28 positron emission tomography (PET)
Paganoni S, Alshikho M, Zurcher N, Cernasov P, Fish J, Loggia M, Rosen B, Hooker J, Cudkowicz M, Atassi N

P235 Cognitive and behavioral disorders in patients with familial and sporadic amyotrophic lateral sclerosis: Clinical, genetic and radiological features
Bersano E, De Marchi F, Corrado L, D'Alfonso S, Sarnelli MF, Solara V, Viganò I, Stecco A, Guenzi E, Cantello R, Mazzini L

P236 Structural and functional thalamic abnormalities in ALS
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P237 Deep phenotyping of frontotemporal dementia (FTD) and FTD-MND in Ireland (a clinic-based cohort longitudinal study)
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P238 Biophysical differences between motor axons in patients with amyotrophic lateral sclerosis and healthy controls
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P239 Changes in peripheral axonal excitability in hereditary spastic paraplegia
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P240 Conduction slowing of peripheral motor nerves may occur in amyotrophic lateral sclerosis
Bokuda K, Shimizu T, Kimura H, Kamiyama T, Yamazami T, Isozaki E

P241 The characteristics of F-waves in patients with Kennedy's disease
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P242 Motor nerve conduction study and F-wave study in patients with amyotrophic lateral sclerosis
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P243 Which motor units fasciculate in amyotrophic lateral sclerosis?
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P244 MUNIX measurements in ALS patients as clinical routine procedure in a specialized neuromuscular treatment unit
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P245 Motor Unit Number index (MUNIX) of six muscles: Normal values and effects of age and gender
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P246 Protective role of Renshaw cells in ALS?
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P247 Split hand syndrome: Echographic evaluation
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P249 Quadro-pulse transcranial magnetic stimulation of the motor cortex in patients with motor neuron disease: A longitudinal study
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P250 Reliability and reproducibility of short-interval intracortical inhibition using threshold tracking transcranial magnetic stimulation is influenced by time of day
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P251 Cortical function, motor neuronal hyperexcitability and survival in ALS
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P252 High bioavailability curcumin and motor neuron degeneration: Results of a pilot therapeutic trial in amyotrophic lateral sclerosis
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P253 Significantly slowed decline of motor functions and improved survival among western ALS patients who used the Chinese medicine formula BuNaoGao (BNG): An up to 13 year follow-up of our ALS participants since BNG initiation
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P254 Teglutik, a novel liquid formulation of riluzole for dysphagic ALS patients
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P255 Bioequivalence study of Teglutik, an innovative oral suspension of riluzole, pharmacokinetic analysis in healthy volunteers
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P256 Open label study about the efficacy and safety of dextrometorphan and Riluzole combination in bulbar type ALS
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P257 The effect of low dose naltrexone on amyotrophic lateral sclerosis treatment
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P258 Open label confirmatory efficacy and safety study about amyotrophic lateral sclerosis (Edaravone (Radicut))
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P259 A safety analysis of Edaravone (MCI-186) during the first 6-cycles (24 weeks) of amyotrophic lateral sclerosis (ALS) therapy from the double-blind period in 3 randomized placebo-controlled studies
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P260 A pilot trial of urate elevation in people with amyotrophic lateral sclerosis (ALS)
Paganoni S, Nicholson K, Macklin E, Bakshi R, Ratai E, Andronesi O, Jafari-Khouzani K, Breen C, Levine-Weinberg M, Chan J, Rosen B, Wills AM, Schwarzschild M, Cudkowicz M

P261 CK-2127107, a selective activator of the fast skeletal muscle troponin complex, for the potential treatment of spinal muscular atrophy
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P262 Modifying Immune Response and Outcome in ALS (MIROCALS): A novel trial design to test the efficacy and safety of low dose Interleukin-2
Leigh PN, Bensimon G, MIROCALS Consortium

P263 Safety of intrathecal autologous adipose-derived mesenchymal stromal cells in patients with ALS
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P264 Data from a completed phase I clinical trial with intraspinal injection of neural stem cells in amyotrophic lateral sclerosis
Mazzini L, Gelati M, Sorarù G, Profico D, Muzi G, Ricciolini C, Carletti S, Giorgi C, Spera C, Frondizzi D, Stecco A, Bersano E, De Marchi F, Querin G, Cantello R, Boulis N, Vescovi AL

P265 Cellular therapy slows down disease progression in Amyotrophic Lateral Sclerosis
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P266 Neuroprotective benefits of estrogen and progesterone enhanced by cellular therapy
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P267 Long-term G-CSF treatment on a named patient basis
Johannesen S, Bruun TH, Kobor I, Baldaranov D, Khomenko A, Grimm T, Küspert S, Peters S, Wirth AM, Grassinger J, Klatt S, Herr W, Kammermaier T, Kassubek J, Müller HP, Ludolph AC, Deppe M, Schulte-Mattler W, Schneider A, Bogdahn U

P268 AICAR treatment ameliorates skeletal muscle and neuromuscular junction pathology without any improvement in motoneuron survival and clinical outcome in a mouse model of spinal muscular atrophy
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P269 High speed FACS identifies novel neurotrophic factor combinations for disease-relevant motor neurons
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P270 Stabilization of SOD1 native structure as a strategy for ALS prevention and treatment
Mohrlüder J, Willbold D, Santur KB, Sevenich M

P271 SOD1 reduction and preclinical efficacy of BIIB067, a SOD1 antisense oligonucleotide in Phase I testing in ALS
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P272 Macrocyclic lactones, a novel drug class identified by ZN Stress zebrafish assay shows ability to modulate early pathophysiological changes in ALS
McGown A, Binny C, Cellot G, Grierson A, Mead R, Shaw P, McDearmid J, Ramesh T

P273 Gene therapy for familial ALS using AAV9 mediated silencing of mutant SOD1
Iannitti T, Scarrott J, Coldicott I, Kaspar B, Ferraiuolo L, Shaw P, Azzouz M

P274 Increasing ALS clinical trial efficiency using group sequential trial designs
van Eijk R, Nikalopoulos S, Leitner M, Ferguson T, Liu D, Eijkemans M, van den Berg LH

P275 Morpholino antisense oligomers as a therapeutic approach for amyotrophic lateral sclerosis
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P276 TGF-β2 improves impaired neuromuscular transmission in the hG93A-SOD1 mouse model of motor neurone disease
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P277 Protective effects of novel engineered MET agonists on astrocyte-spinal neuron co-cultures from SOD1G93A transgenic mice
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P278 MicroNeurotrophins improve survival in motor neuron-astrocyte co-cultures but do not improve disease phenotypes in a mutant SOD1 mouse model of amyotrophic lateral sclerosis
Glajch K, Ferraiuolo L, Mueller K, Gravanis A, Shaw P, Sadri-Vakili G

P279 Effect of CDNF administration in SOD1-G93A mouse model of amyotrophic lateral sclerosis
De Lorenzo F, Voutilainen M, Montonen E, Khanal P, Airavaara M, Tuominen R, Lindholm D, Sendtner M, Saarma M

P280 Targeting of the retinoid pathway in SOD1G93A transgenic mice by delivery of engineered polymeric nanoparticles
Medina D, Chung E, Ceton R, Kovalik T, Sirianni R, Bowser R

P281 Selective knockdown of misfolded SOD1 through chaperone-mediated autophagy-based lysosomal degradation
Zhang X, Guan T, Li XM, Wang Yu T, Namaka M, Marzban H, Kong J

P282 Impaired activity of Nrf2 is restored by Cu-ATSM
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P283 Copper delivery by CuATSM derivatives and survival of SOD-G93AxCCS mice
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P284 Copper malfunction is common to sporadic MND and animal models of familial MND: Implications for copper-ATSM as a potential therapeutic and PET imaging agent
Hilton J, Roberts B, McLean C, Donnelly P, Henderson R, Rose S, White A, Bush A, Crouch P

P285 The GSK-3 inhibitor AZD1080 delays onset and improves motor function in SOD1G93A transgenic mouse model of MND
Maroof N, Stephenson J, Brown-Wright SH, Escott J, Shaw P, Mead R

P286 Characterization of the therapeutic potential of the potassium channel blocker 4-aminopyridine in ALS
Thau-Habermann N, Kefalakes E, Hermann A, Wegner F, Petri S

P287 Interleukin-6 blockade improves inflammatory but not metabolic condition in ALS
Patin F, Baranek T, Vourc'h P, Nadal-Desbarats L, Gossens JF, Marouillat S, Dessein AF, Descat A, Madji Hounoum B, Bruno C, Watier H, Si-Tahar M, Leman S, Lecron JC, Andres C, Corcia P, Blasco H

P288 Targeting extracellular cyclophilin A extends survival in the SOD1G93A mouse model of ALS
Pasetto L, Pozzi S, Castelnovo M, Basso M, Estevez AG, Fumagalli S, De Simoni MG, Castellaneta V, Bigini P, Trojsi F, Monsurrò MR, Callea L, Malesevic M, Fischer G, Freschi M, Tortarolo M, Bendotti C, Bonetto V

P289 Disease specific changes in sirtuin 3 levels in a mouse model of amyotrophic lateral sclerosis
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P290 Riluzole rescues the early pre-clinical changes in ALS: Will early use of riluzole be beneficial in the clinic?
Panagiotaki N, Binny C, Cellot G, Horsty J, Grierson A, Mead R, Shaw P, McDearmid J, Ramesh T

P291 Riluzole and a macrocyclic lactone rectifies interneuron pathophysiology and delays the early motor dysfunction in the SOD1 G93A mouse model of ALS: Is early intervention important in treating ALS?
McGown A, Binny C, Giada C, Panagiotaki N, Horsty J, Grierson A, Mead R, Shaw P, McDearmid J, Ramesh T

P292 Histone deacetylase inhibitors enhance efficacy of drugs to maintain protein quality control
Durham H, Minotti S, Larochelle N, St. Louis K, Nalbantoglu J

P293 Efficient CNS targeting in adult mice by a single lumbar intrathecal AAV9-eGFP administration: application for neurological disorders
Bey K, Ciron C, Dubreil L, Deniaud J, Cristini J, Blouin V, Aubourg P, Colle MA

P294 Dosing and time course of targeted non-viral gene delivery to motor neurons in-vivo
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P295 Cell-sheet transplantation in a mouse model of amyotrophic lateral sclerosis
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P296 Pharmacologic and pathophysiologic readouts of C9orf72 therapy in iPS neurons
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P297 Identification of small molecules with therapeutic relevance for C9orf72-ALS/FTD
Balendra R, Simone R, Preza E, Mizielinska S, Ridler C, Moens T, Gilbert J, Wilson K, Woodling N, Partridge L, Fratta P, Wray S, Patani R, Parkinson G, Neidle S, Isaacs A

P298 CRISPR/Cas9 genome editing results in precise genotypic and phenotypic correction in C9orf72 mutant iPSC-derived motor neurons
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P300 Changes in cognitive profile during the course of 6 months in ALS
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P301 Coping strategies, gender and disease subtype in MND/ALS
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P302 Cognitive changes and impact on clinical choices in ALS
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P303 Overcoming verbal-motor limitations in ALS: A new Eye-Tracker based neuropsychological battery
Poletti B, Carelli L, Solca F, Lafronza A, Pedroli E, Faini A, Zago S, Ticozzi N, Meriggi P, Cipresso P, Lulé D, Ludolph AC, Riva G, Silani V

P304 Selective attention in amyotrophic lateral sclerosis patients: Neuropsychological evaluation by using an eye-tracking system approach
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P305 The relationship among onset type, neuropsychology and FDG-PET brain metabolic change in amyotrophic lateral sclerosis
Cui B, Cui L, Tai H, Shen D, Liu M, Li X, Li F

P306 Bulbar, motor and language impairment interactions in ALS
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P307 The Edinburgh cognitive and behavioural ALS screen in a Chinese amyotrophic lateral sclerosis population
Ye S, Ji Y, Fan D

P308 Edinburgh Cognitive and Behavioural Amyotrophic Lateral Sclerosis Screen (ECAS) versus extensive neuropsychological examination: A comparative study in a Spanish ALS cohort
Cazorla S, Montoliu A, Salvado M, Jacas C, Gamez J

P309 Validation of the Edinburgh ALS Cognitive and Behavioural Screen (ECAS) in Canada
Chenji S, Mah D, Lee A, Downey C, Pham S, Salmon K, MacDonald C, Petrillo J, Piechowicz C, Johnston W, Zinman L, Genge A, Korngut L, Shoesmith C, Kalra S

P310 Japanese version of the ALS-FTD-questionnaire (ALS-FTD-Q-J)
Watanabe Y, Beeldman E, Raaphorst J, the ALS-FTD-Q-J research group, Ito S, Adachi T, Takigawa T, Nakashima K

P311 Clinical usefulness of MoCA for the detection of cognitive impairment in amyotrophic lateral sclerosis patients
Nagashima K, Makioka K, Fujita Y, Ikeda M, Ikeda Y

P312 New insight into the cortical correlates of extra-motor clinical profiles in non-demented ALS patients
Consonni M, Contarino V, Catricalà E, Dalla Bella E, Bruzzone MG, Lauria G, Cappa SF

P313 Three single case study comparison of apathy on the FTD-MND spectrum
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P315 Distinct patterns of cognitive behavioral change in emerging FTLD in the presence and absence of MND support: A 'bottom-up' model of FTLD onset
Kraft J, Flaherty C, Hotz A, Slinkard K, Simmons Z

P316 A population-based biopsychosocial investigation of caregiver quality of life in ALS
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P317 Need for psychotherapy in patients with ALS and their relatives
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P318 Exploring patient and public involvement in motor neurone disease
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P319 Stigma in people with motor neurone disease/ALS
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P320 Depression and anxiety in people with MND/ALS
James E, Mills RJ, Tennant A, Young CA, on behalf of TONiC group

P321 Symptoms of psychological trauma resulting from being given a diagnosis of motor neurone disease
Marchment D, Goldstein LH, Al-Chalabi A

P322 Depression before the diagnosis in amyotrophic lateral sclerosis patients with cognitive dysfunctions: Two independent events or a preview of the same?
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P324 Breath stacking using a lung recruitment bag with ALS patients in north Scotland
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P326 Respiratory muscle unloading (RMU) to treat exertional related dyspnea (ERD) in ambulatory patients with Amyotrophic Lateral Sclerosis (ambALS)
Sanjak M, Malloy D, Holsten S, Langford VL, Bravver E, Brooks BR

P327 False negative, negative inspiratory tests in an ALS patient
Ross M, Burge M, Miller B, Dalrymple J, Wesselius L

P328 Evaluation of the respiratory function in ALS patients by diaphragm echomyography
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P329 Motor neuron disease: Assessment and management of respiratory complications
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P330 Diaphragm pacing: Survival data for patients implanted since FDA approval continues to show promising results
Onders R, Katirji B, Elmo M, Kaplan C, Schilz R

P331 Novel trial design in a clinical study of diaphragm pacing (DPS) for ALS
Miller R, Ennist D, Thompson J, Fritz M, Moore D

P332 Clinical results of diaphragm pacing in Japanese patients with amyotrophic lateral sclerosis
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P333 The use of a hand held ventilator to supplement NIV for patients with respiratory insufficiency
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P334 Changes in NIV ventilation over time - a longitudinal study
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P335 Prolonged survival of non-invasive ventilation in Japanese patients with ALS
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P337 Differences in achievement of tidal volumes and rapid shallow breathing between PS and VAPS modes of non-invasive ventilation
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P338 Effectiveness of automatic intratracheal suctioning system for amyotrophic lateral sclerosis patients with tracheostomy-invasive ventilation
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P339 Sputum substance P concentration and peak cough experimental flow in patients with ALS after administration of enalapril
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P340 Use of a water protocol in ALS patients with thin liquid dysphagia
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P341 Dysphagia in amyotrophic lateral sclerosis and possible impact on riluzole management
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P342 Evaluating the potential of diet and food components as disease modifiers in amyotrophic lateral sclerosis (ALS)
Dawczynski C, Ringer TM, Prell T, Stubendorff B, Witte OW, Lorkowski S, Grosskreutz J

P343 Analysis of the interface between dysphagia and nutritional implications in patients with motor neuron disease
Alves PCL, Oda AL, Vecina ALC, Neves JWC, Oliveira ASB

P344 Percutaneous endoscopic gastrostomy in patients with ALS at the Ljubljana ALS Centre – a retrospective analysis
Trdina P, Koritnik B, Leonardis L, Dolenc Groselj L, Plut S, Kocijancic B, Zidar J

P345 Gastrostomy and survival in ALS patients
Kwan J, Domingo C, Diaz-Abad M, Epps D, DeRusso A

P346 Gastrostomy placement in ALS patients-outcomes after changing clinical practice from percutaneous endoscopic gastrostomy (PEG) to radiographically inserted gastrostomy (RIG)
Maiser S, Bhangav A, Molnar L, Bares L, Pankratz N, Droberg P, Tiryaki E

P347 Changing practice from radiologically inserted gastrostomy (RIG) to nasal unsedated seated gastrostomy (NuPEG): Our experience
Datta A, Copsey H, Baumer D, Zandi M, Skerratt S, Woodward J, Roberts R

P348 ALS/MND patients prefer low profile gastrostomy tubes: Analysis confirms safety
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P349 Gastrostomy, body weight loss and survival in amyotrophic lateral sclerosis: A population-based study
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P350 Glucose clearance as a contributing factor for altered energy needs in ALS
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P351 Body composition analysis of patients with motor neurone disease by bioelectrical impedance
Moreira R, Salvioni C, Stanich P, Oliveira A

P352 Body composition analysis and energy requirement assessed by bioelectrical impedance analysis in patients with advanced ALS
Tateishi T, Okadome T, Yoshimura M, Yokoyama J, Nakamura N, Takase KI

P353 Validation of anthropometrically-derived body composition against DEXA in ALS
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P354 What DO people living with MND think about dysphagia?
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P355 The clinical utility of a self-reported swallowing outcome measure
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P356 Managing hydration in amyotrophic lateral sclerosis/motor neuron disease (ALS/MND): Are suprapubic urinary catheters the answer?
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P357 Comparison of driving capacity with distraction using the lane change task in drivers with amyotrophic lateral sclerosis compared with healthy controls
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P358 Eye-tracking training for ALS patients using serious games
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P359 Provision of assistive devices in ALS in Germany: Real world data in 4 years of managed care
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P360 Mobility equipment use by people with ALS/MND in Australia
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P361 Common powered mobility components for the ALS/MND population: The US experience
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P362 Telemedicine in ALS: Perspectives from the clinic team during a pilot program
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P363 Implementation of a wireless device to monitor the cardiorespiratory response to aerobic exercise in ALS patients: A pilot study
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P364 A descriptive study of the level of satisfaction with assistive technology devices for patients with amyotrophic lateral sclerosis
Allegretti A, Clegg A, Silva A, Polcyn R, Jackson C

P365 ALS Assistive Technology Challenge: Advancing innovative communication solutions for ALS patients
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P366 Patient's communication stage influences the usage of respite admission for the patients with ALS in Japan
Narita Y, Odachi K, Abe M, Nakai M, Harada Y, Kitano K, Fukagawa C, Kikuchi H

P367 Is home exercise effective for patients with early-stage amyotrophic lateral sclerosis? A prospective pilot study
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P368 Patient activity of daily living for amyotrophic lateral sclerosis
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P369 A randomized controlled trial of endurance training in ALS patients
Basilico M, Prati C, Pain D, Pagani M, Mora G, Marinou K

P370 Dysarthria in ALS: An observational cohort study
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P371 Communicative participation in persons with amyotrophic lateral sclerosis
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P372 A study in customer experience in clinical trial inquiry in the United States
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P373 Perceived participation in patients with ALS
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P374 Empathy, sharing and support among users of a forum for people with MND
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P375 Understanding the incomprehensible – patients' and spouses' experiences of comprehensibility of amyotrophic lateral sclerosis
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P376 Do the preferences for health services of ALS patients and their carers change with disease progression? A longitudinal discrete choice experiment
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P377 Characteristics of ALS families and their youth caregivers: Results from a national US study
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P378 Care burden of families providing care for patients with amyotrophic lateral sclerosis
Konagaya M, Kawaguchi Y

P379 The development of evidence-based recommendations for supporting informal carers of people living with motor neurone disease
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P380 Support group for next of kin to patients diagnosed with ALS/MND
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P382 Economic evaluations, cost studies and utility studies in motor neurone disease/amyotrophic lateral sclerosis: A systematic methodological review
Moore A, Hughes D, Young CA, on behalf of the TONiC study group

P383 The patient journey to a national ALS clinic: Delayed diagnosis and economic cost
Galvin M, Ryan P, Heverin M, Madden C, Maguire S, Normand C, Vajda A, Hardiman O

P384 Personnel costs of a multidisciplinary ALS clinic
Sawicki D, Drake K, Paganoni S, Berry J, Cudkowicz M

P385 Emotional experience in patients with amyotrophic lateral sclerosis withdrawing from long-term ventilation
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P386 Determining the impact of a designated multidisciplinary care centre in Cambridge on the natural history and management of motor neurone disease
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P387 Motor neurone disease: Staff perspectives of the goal setting process within a community multidisciplinary team
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P388 ALS medical needs and the regional medical resource survey in Japan
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P389 How 95 percent of all Danish ALS patients use a national centre of rehabilitation expertise
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P390 Evaluation of the quality of life and the functionality scales in patients with MND
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P391 Attitudes towards life-prolonging measures and use of interventions in a multidisciplinary ALS clinic
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P392 Practice pattern of non-invasive ventilation and its impact on end-of-life care in patients with amyotrophic lateral sclerosis among Canadian care providers
Chum M, Gofton T, Shoesmith C

P393 Re-examining the utility value of mechanical ventilators to enable the long-term survival of ALS patients
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P394 Living organ donation in patients with amyotrophic lateral sclerosis
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P395 How can we educate about palliative care for ALS?
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P396 The palliative care needs of people with advancing neurological disease in Ireland
Shanagher D, Weafer J, Lynch M, Rodgers M

P397 Palliative care outcomes in ALS
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P398 Collaboration between ALS and palliative specialists in Denmark
Jakobsen S, Nikolajevic-Pujic S, Gredal O

P399 What are Japanese neurologists' opinion on morphine/sedative use in ALS patients at the end of life stage?
Ogino Y, Takahashi K, Yanagita K, Ogino M

P400 Provider orders for life sustaining treatment (POLST) - a tool for documenting choices of ALS patients
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Arcila-Londono X, Vader P, Walk D, Sherman A

BW2 Patterns of disease progression in SOD1 familial motor neuron disease: a retrospective study of 42 patients with long-term follow-up
Pavlakis P, Shahbazi M, Thoman A, Bin Bin F, Silani V, Ludolph AC, Ajroud-Driss S, Marklund S, Appel S, Andersen P, Lange D

BW3 The IceBucket Challenge Sporadic ALS Australia Systems Genomics Consortium: SALSA-SGC
Henders AK, Henderson R, Ziaimatin H, Ngo ST, Garton FC, Benyamin B, Al-Chalabi A, Edis R, Kiernan M, Laing N, Lamont P, Mathers S, Needham M, Nicholson G, Pamphlett R, Rowe D, Schultz D, Talman P, Veldink J, van den Berg L, Visscher PM, Vucic S, Williams K, Zhao Q, McCombe P, Blair IP, Wray NR

BW4 Assessment of variant callers on whole-genome sequence and MiSEQ data of ALS patients
Iacoangeli A, Sproviero W, Shatunov A, Al Khleifat A, Jones A, Dobson R, Newhouse SJ, Al-Chalabi A

BW5 Integrating copy-number analysis with structural-variation detection in 50 ALS patients with two extreme survival phenotypes
Al Khleifat A, Iacoangeli A, Shatunov A, Sproviero W, Al-Chalabi A

BW6 Genome-wide analysis of polymorphic tandem repeats through the development of a NGS method in a cohort of ALS patients
Corrado L, Bordoni R, Genovese LM, MAngano E, Geraci F, Severgnini M, D'Aurizio R, Locci C, De Marchi F, Mazzini L, Brusco A, Manzini G, Pellegrini M, De Bellis G, D'Alfonso S

BW7 Shared novel variant analysis identifies novel genes in familial ALS from whole exome sequencing
Wong CH, Topp S, Lee YB, Smith BN, Mueller S, Cocks G, Ticozzi N, Landers J, Shaw CE

BW8 Whole genome sequencing as a tool to unravel rare variants associated with ALS survival
Moisse M, Robberecht W, Lambrechts D, Pulit S, van den Berg L, Veldink J, Consortium Project Mine Sequencing, Van Damme P

BW9 Functional analysis of TDP43: Interaction with the epigenetic machinery
Sanna S, Esposito S, Masala A, Manca MA, Rassu M, Iaccarino C, Crosio C

BW10 Genome-wide DNA methylation profiling in sporadic ALS
Tiloca C, Gentlini D, Verde F, Calini D, Colombrita C, Pisoni S, Borghi MO, Poletti B, Ticozzi N, Silani V, Ratti A

BW11 Multicentric referral-based study of ALS-related genes in an Argentine ALS/FTD cohort
Gargiulo-Monachelli G, Leblond C, Bettini M, Figueredo A, Mele I, Garau ML, Rugiero MF, Gonzalez Deniselle MC, Dion PA, Pagano MA, Rouleau GA

BW12 Analysis of the protective effect of genetic admixture in amyotrophic lateral sclerosis
McLaughlin R, Byrne R, Hardiman O

BW13 Functional and genetic characterisation of TBK1 mutations in a large cohort of familial ALS patients
de Majo M, Smith B, Gkazi A, Topp S, Nishimura A, Miller J, Vance C

BW14 Heterozygous deficiency of TBK1 in the high copy number SOD1-G93A transgenic mouse model
Brenner D, Bruno C, Ludolph AC, Weishaupt JH

BW14A A huTDP-43^{Q331K} mouse model shows signs of both motor neuron disease (MND) and frontotemporal dementia (FTD)
Stephenson J, Alix J, Kennerley A, Shaw P, Mead R

BW15 Humanising the Tardbp locus in the mouse
De Giorgio F, Devoy A, Zhu F, MacKenzie K, Acevedo-Arozena A, Fisher EMC

BW16 Understanding the link between cortical injury and ALS
Lagrimas A, Kozlowski D, Ozdinler PH, Jara J

BW17 Patterns of cortical atrophy at diagnosis in amyotrophic lateral sclerosis and implications on prognosis
Abulaila M, Rafiq M

BW18 An autopsy case of amyotrophic lateral sclerosis presented pallido-nigro-luysian degeneration with TDP-43 pathology
Uchino A, Ogino M, Fujigasaki J, Nishiyama K, Murayama S

BW19 Assays of clinical importance in relation to the clinical course in ALS
Mitre Ropero B, Rosén H, Persson L

BW20 Bioenergetic profiling of cellular models of motor neurone disease to identify new approaches for supporting motor neurone health
Allen S, Francis L, Myszczynska M, Ferraiuolo L, Shaw P

BW21 Analysis of axonal transport in cultured neurons derived from an ALS mouse model by using the microfluidic cell culture system
Otomo A, Araki R, Ishida T, Shirakawa R, Mitsui S, Sato K, Ono S, Yokoyama S, Kimura H, Hadano S

BW22 C9orf72 G4C2 HRE-mediated nucleocytoplasmic trafficking defects alters autophagic targeting
Mann J, Gleixner A, Marks M, Pandey U, Donnelly C

BW23 Systematic evaluation of the potential for repurposing autophagy targeting drugs in the treatment OF ALS-FTLD
Servante J, Scott D, Goode A, Cox A, Layfield R

BW24 Gene therapy for amyotrophic lateral sclerosis with migration of bone marrow-derived cells
Terashima T, Ogawa N, Kobashi S, Katagi M, Okano J, Kawai H, Maegawa H, Urushitani M, Kojima H

BW25 A pilot study on the effects of plasma exchange with Albutein® 5% on motor and cognitive function of ALS patients
Paipa A, Dominguez R, Massuet L, Ortega S, Barceló M, Woodward M, Páez A, Povedano M

BW26 Cannabinoids for symptom management in amyotrophic lateral sclerosis: A pilot study
Magnussen C, Seguin R, O'Connell C, Genge A, Ware M

BW27 A registry-based randomized controlled, double-blinded clinical trial of Pimozide in patients with ALS
Martinez J, Robitaille R, Parker A, Kabashi E, Julien JP, Drapeau P, Zinman L, Korngut L

BW28 Interim results from an open-label, single-center, hybrid-virtual 12-month trial of a Lunasin regimen for patients with amyotrophic lateral sclerosis (ALS)
Bedlack R, Sadri-Vakili G, Dios A, Spector A, Morgan E, Wicks P

BW29 The Genervon case: Analysis and implications on the right-to-try debate in ALS
Ringkamp G, Zoughlami A

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Care Practice

CP1 Investigating the use of digital legacies with people affected by MND
Clabburn O, O'Brien M, Jack B, Knighting K

CP2 The Carers' Alert Thermometer (CAT): Identifying the support needs of family carers of people living with MND
O'Brien M, Knighting K, Jack B, Fairfield H, Drinkwater N

CP3 Well-being and care burden of close relatives to persons with ALS-FTD
Gredal O, Hovmand B

CP4 Psychosocial support for ALS informal caregivers: Study protocol of a randomized controlled trial
de Wit J, Schröder C, Beelen A, van den Berg LH, Visser-Meily A

CP5 A prospective study of quality of life in newly diagnosed ALS patients
Jakobsson Larsson B, Nygren I, Englund T

CP6 Influences on quality of life for people with MND/ALS: Progress of the trajectories of outcome in neurological conditions study
Young C, Dyas-Wollf L, Tennant A, on behalf of TONiC group

CP7 People living with motor neurone disease facing their own mortality
Harris D

CP8 Preparing for end-of-life after Carter: A review of end-of-life experiences and perspectives of people with ALS, their families and health care providers
Luth W, Moir M, Lee A, Vale C, Bubela T, Johnston W

CP9 Portrayals of ALS patients and end of life issues: Media analysis post Carter v. Canada (2015)
Moir M, Bubela T, Johnston W

CP10 Palliative care in a US Veterans Hospital ALS Program: Structure, process and outcomes
Ratner E, Bradshaw K, Greenwood D

CP11 Streamlining primary care for veterans with amyotrophic lateral sclerosis
Sluder K, Johnson J

CP12 Proving our worth – developing outcome measures for the motor neurone disease multi-disciplinary clinic
Prendiville V, Glew R, Hirst C, Thomas A, Annandale J, Williams C, Samuel Anne, Hookway A, Thomas C, O'Connell D, Croft R, Furlong K

CP13 Improving the clinic experience for patients: Decreasing wait time in multidisciplinary clinics
Shahbazi M

CP14 Care, Audit, Research and Evaluation (CARE-MND) in the Scottish motor neurone disease population
Leighton D, Stephenson L, Colville S, Newton J, Davenport R, Gorrie G, Swingler R, Chandran S, Pal S

CP15 Scotland the Brave – Changes in funding of MND Clinical Specialists in Scotland
Newton J, Bethell A

CP16 Supporting lifelong care in the community using the Long Term Conditions Register: Patient feedback
Prema R, Canova C

CP17 The "Uppsala Model": The care and treatment of MND patients at Uppsala University Hospital entails a multidisciplinary MND program
den Dulk C, Franke C, Cidh Å, Banieghbal B

CP18 Physiotherapy, Occupational Therapy, Speech and Language Therapy in amyotrophic lateral sclerosis – experience of 5 years managed care in Germany
Maier A, Steinfurth L, Funke A, Kettemann D, Keck M, Walther B, Münch C, Meyer T

CP19 Case study in research: A viable method for enhancing understanding of MND within Occupational Therapy
Carey H

CP20 What drives driving habits in patients with ALS?
Ciani G, Shabazi M, Holzberg S, Lange D

CP21 teleBCI – an online platform for brain-computer interface training
Geronimo A, Simmons Z

CP22 A preliminary evaluation of exoskeletal training for ALS patients in an ambulatory setting
Funke A, Kettemann D, Keck M, Spittel S, Meyer T

NEALS 1 The effects of Nuedexta on speech pause time
Green JR, Allison K, Pioro E, Pattee G, Smith R

NEALS 2 Mouthmetrics: A tool for assessing bulbar motor involvement using a low-cost, 3D depth sensing system
Green JR, Richburg BD, Markan S, Berry J

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Clinical Work in Progress

CW1 Preliminary results from Breathe MND-1 trial: Natural history of sleep disordered breathing in motor neuron disease; and randomised controlled trial of a new mode of non-invasive ventilation
Aiyappan V, McEvoy D, Catcheside P, Schultz D, Allcroft P, Keighley-James G, Glaetzer K, Antic N

CW2 Review of personalised ventilation programmes and changes in pressure support over time in patients with MND/ALS
Rogers C, Banerjee S, Oliver D

CW3 Understanding the use of noninvasive ventilation in the treatment of amyotrophic lateral sclerosis: Results of an international physician survey
Heiman-Patterson T, Andrews J, Cudkowicz M, DeCarvalho M, Genge A, Hardimann O, Jackson C, Kulke S, Lechtzin N, Mitsumoto H, Rudnicki S, Silani V, Van den Berg LH

CW4 Does NIV and age influence survival rate in patients with amyotrophic lateral sclerosis: Experience in a multidisciplinary clinic - a retrospective review
Magnan N, Vitale T, Genge A, Salmon K

CW5 Body composition and disease progression in patients with motor neurone disease
Salvioni C, Stanich P, Lellis R, Oliveira AB

CW6 Gain of body fat in amyotrophic lateral sclerosis patients: The great nutritional challenge
Stanich P, Salvioni C, Lellis R, Oliveira AB

CW7 Understanding the impact of gastrostomy and quality of life in patients with ALS
Ciani G, Holzberg S, Shahbazi M, Lange D

CW8 Clinical management of oral hygiene for patients with ALS
McDonagh M, Riggs M, Banker-Horner L, Barkhaus P, Stich D, Domagala A, Fee D

CW9 Standard of Care for dysphagia management in ALS patients
Epps D, Kitila M, Diaz-Abad M, Kwan J

CW10 Videofluoroscopic assessment of swallowing dysfunction in ALS
Epps D, Alapati J, Kitila M, Diaz-Abad M, Kwan J

CW11 ALS Functional Communication Scale: A tool for standardizing and expanding speech therapy interventions and documenting improvement in communication
Roman A

CW12 Mobile technology towards automatic detection of early-stage ALS from short speech samples
Wang J, Kothalkar P, Herndon B, Cao B, Heitzman D

CW13 Language changes in ALS: Preliminary results on a population-based study
Pinto-Grau M, Burke T, Lonergan K, Murphy L, Elamin M, Hardiman O, Pender N

CW14 The role of neuropsychology within a multidisciplinary team in an acute care setting
Meldrum S, Kersel D, Gorrie G

CW15 Neuropsychiatric symptoms in people living with motor neurone disease and their family members
McHutchison C, Vadja A, Heverin M, Stephenson L, Colville S, Pal S, Swingler R, Chandran S, Hardiman O, Abrahams S

CW16 Application of neuropsychological measures for patients with amyotrophic lateral sclerosis (ALS)
Parmenter M, Lange D, Shahbazi M

CW17 Investigating cognitive profiles in motor neurone disease – initial findings of the Cognitive And Behavioural Impairment in ALS (CABIA) study
Clarke M, Fratta P, Malaspina A, Zampedri L, Howard R, Sharma N, Sidle K, Rohrer J

CW18 Cognitive impairment in amyotrophic lateral sclerosis (ALS): Screening tools, experiences and prognosis in Norway
Taule T, Morland AS, Assmus J, Tysnes OB, Rekand T

CW19 ALS Testing through Home-based Outcome Measures (The AT HOME Study)
Shefner J, Mackline E, Narayanaswami P, Rutkove S

CW20 The ALS Early Recognition Timeline (ALERT) Project: Methods for a work in progress
Nicholson K, Haley K, Castro V, Gainer V, Murphy S, Schoenfeld D, Ferguson T, Atassi N

CW21 Feasibility and reliability of modified oculobulbar facial respiratory score (mOBFRS) in amyotrophic lateral sclerosis (ALS) and sporadic inclusion body myositis (sIBM)
Gebert N, Wencel M, Rai S, Tierney P, Mozaffar T, Goyal N

CW22 Modelling ALS progression using an artificial neural network-based computational system
Uberti M, Galvani G, Verde F, Doretti A, Maderna L, Piccarreta R, Silani V, Borgonovo E, Ticozzi N

CW23 A retrospective study of patients diagnosed with amyotrophic lateral sclerosis and concurrent cases of peripheral thrombi
Kaiser M, Holzberg S

CW24 The diagnostic yield of laboratory investigations in the work up for a suspected diagnosis of amyotrophic lateral sclerosis
Mirian A, Korngut L

CW25 Serial high-density surface electromyography (HDSEMG) recordings in motor neurone disease: Fasciculations as a biomarker of motor neurone health
Bashford J, Wickham A, Drakakis E, Boutelle M, Mills K, Shaw C

CW26 Skeletal muscle mri in spinal and bulbar muscular atrophy – a study in an animal model and patients
Klickovic U, Gray A, Sinclair C, Shah S, Rega M, Torrealdea F, Zampedri L, Clarke J, Howard R, Malaspina A, Orrell R, Sharma N, Sidle K, Hanna M, Golay X, Yousry T, Morrow J, Greensmith L, Thornton J, Fratta P

CW27 A systematic review and meta-analysis of the diagnostic utility of cerebrospinal neurofilaments in motor neurone disease
Akyol L, Soane T, Yeo JM, Green A, Chandran S, Pal S

CW28 Isolation and characterisation of circulating neurofilament-containing aggregates in health and disease
Adiutori R, Zubiri I, Aarum J, Lu CH, Bremang M, Jung S, Leoni E, Liang HC, Mitra V, Ward M, Pike I, Malaspina A

CW29 Microglia cell-type specific NF-κB networks in amytrophic lateral sclerosis mouse model
Béland L-C, Boutej H, Kriz J

CW30 High-affinity vital staining of neuromuscular junctions for confocal endomicroscopy
Roesl C, Jones R, Dissanayake K, Gillingwater TS, Skehel P, Ribchester R

Programme of events

Wednesday 7 December

07.00 – 19.00	Registration International Symposium	*Level 1 Foyer*	*Level 1*
07.00 – 19.00	Speaker Room	*Liffey Boardroom 3*	*Level 1*
08.30 – 10.15	Symposium Joint Opening Session	*The Liffey B*	*Level 1*
11.00 – 17.40	Symposium Biomedical Sessions 2A/3A/4A	*The Liffey A*	*Level 1*
11.00 – 17.30	Symposium Clinical Sessions 2B/3B/4B	*The Liffey B*	*Level 1*
10.30 / 15.30	Refreshment breaks am/pm	*The Forum and Level 3 Foyer*	*Ground and Level 3*
12.30 – 14.00	Lunch	*The Forum and Level 3 Foyer*	*Ground and Level 3*
12.30 – 14.00	Neurofilaments in the ALS clinic and beyond: From assays to clinical practise (closed meeting)	*Liffey Meeting Room 2b*	*Level 1*
13.00 – 14.00	Pan-Asian Consortium for Treatment and Research in ALS (PACTALS)*	*Liffey Meeting Room 2a*	*Level 1*
17.45 – 19.30	Poster Session A	*The Forum*	*Ground*
19.30 – 21.45	Assessing disease progression in ALS: What are the most relevant measures?	*Wicklow Hall 2*	*Level 2*

Thursday 8 December

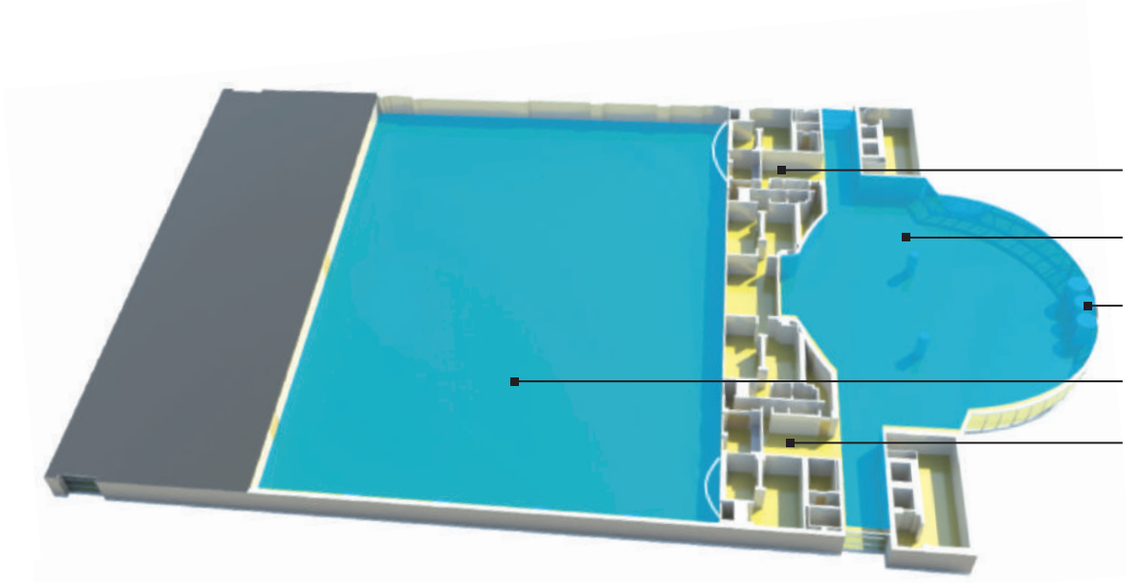
07.00 – 19.00	Registration International Symposium	*Level 1 Foyer*	*Level 1*
07.00 – 19.00	Speaker Room	*Liffey Boardroom 3*	*Level 1*
08.30 – 17.30	Symposium Biomedical Sessions 5A/6A/7A/8A	*The Liffey A*	*Level 1*
08.30 – 17.40	Symposium Clinical Sessions 5B/6B/7B/8B	*The Liffey B*	*Level 1*
08.30 – 17.40	Symposium Alternative Sessions 5C/6C/7C/8C	*Liffey Hall 2*	*Level 1*
10.00 / 15.30	Refreshment breaks am/pm	*The Forum and Level 3 Foyer*	*Ground and Level 3*
12.30 – 14.00	Lunch	*The Forum and Level 3 Foyer*	*Ground and Level 3*
12.30 – 14.00	Biogen External Investigator meeting	*Liffey Meeting Room 2*	*Level 1*
17.45 – 19.30	Poster Session B	*The Forum*	*Ground*
18.00 – 19.00	Cochrane Neuromuscular/ALS Group	*Liffey Meeting Room 2b*	*Level 1*

Friday 9 December

07.00 – 08.30	Western ALS Investigator Meeting (closed meeting)	*Liffey Meeting Room 2a*	*Level 1*
07.00 – 14.00	Registration International Symposium	*Level 1 Foyer*	*Level 1*
07.00 – 14.00	Speaker Room	*Liffey Boardroom 3*	*Level 1*
08.30 – 12.50	Symposium Biomedical Sessions 9A/10A	*The Liffey A*	*Level 1*
08.30 – 12.20	Symposium Clinical Sessions 9B/10B	*The LIffey B*	*Level 1*
10.00	Refreshment break	*The Forum and Level 3 Foyer*	*Ground and Level 3*
12.30 – 13.45	Lunch	*The Forum and Level 3 Foyer*	*Ground and Level 3*
13.45 – 15.30	Symposium Joint Closing Session 11	*The Liffey B*	*Level 1*

*This meeting is open to delegates from the Asia-Pacific Region

Locations


Ground floor
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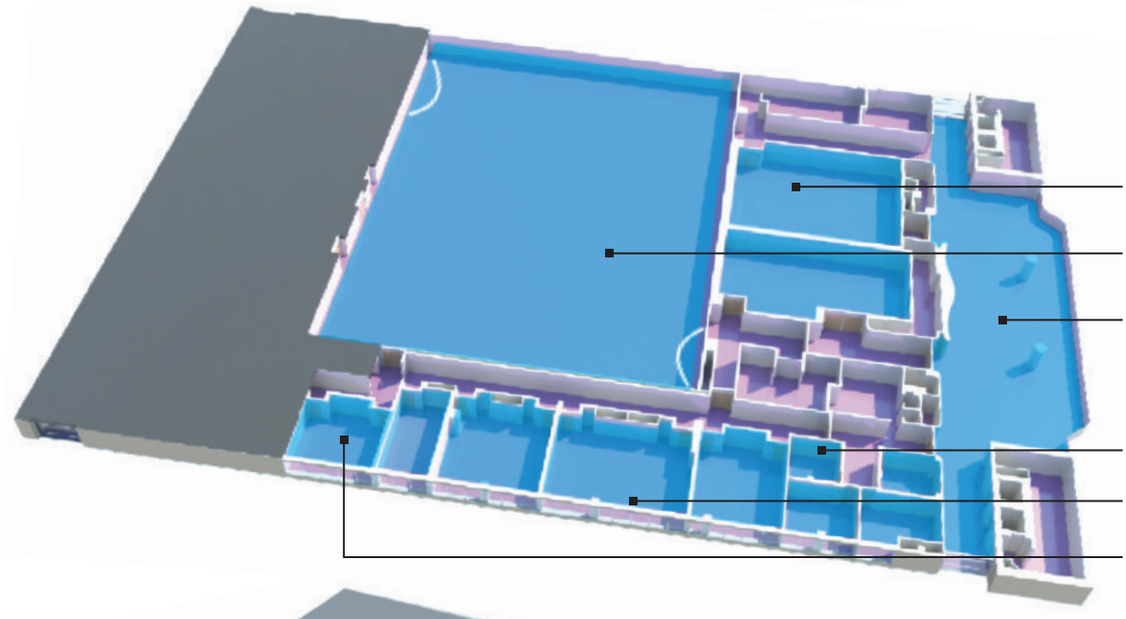
The Forum
Cloakroom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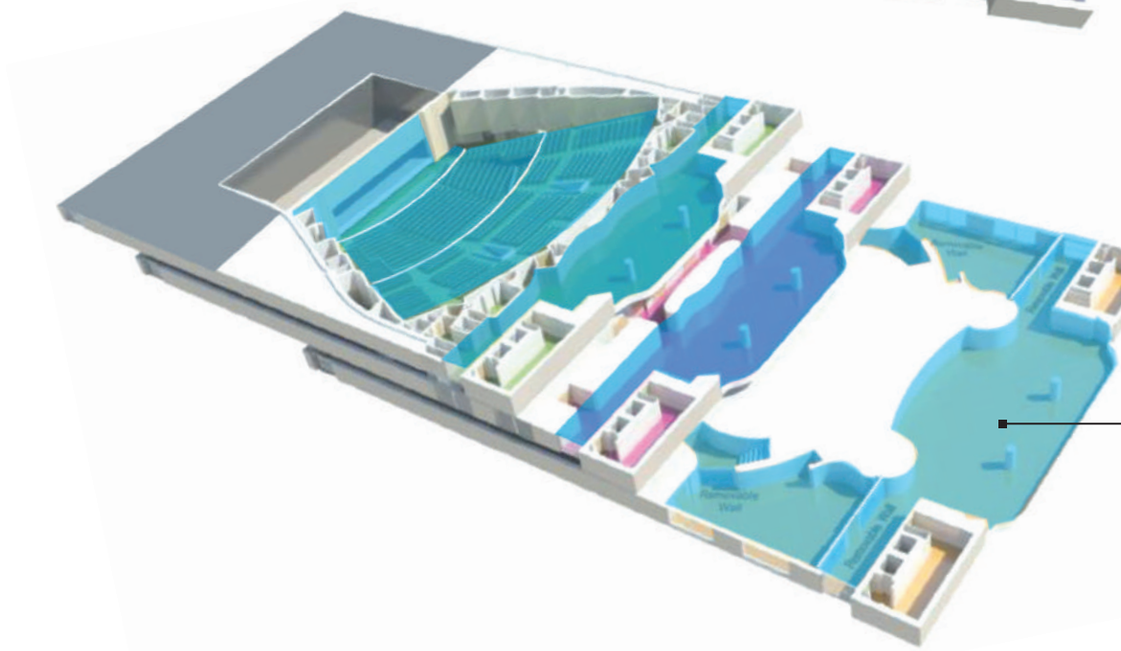
Liffey Meeting Room 2
Liffey Meeting Room 5


Level 3
Level 3 Foyer

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