

Wednesday 12-07-2023

Time	Session	Chair(s)
10:00-13:00 hrs	Registration and lunch	
13:00-13:20 hrs	Opening	Monica Povedano & Leonard van den Berg
13:20-14:40 hrs	<p>Session 1. Molecular mechanisms (part I)</p> <p>Invited speaker: Dr. Potero Otin - Lipid Landscapes in ALS</p> <p>1. The role of SPP1 and perivascular fibroblasts in ALS neurodegeneration - <i>Jianing Lin, Karolinska Institutet (Sweden)</i></p> <hr/> <p>2. TDP-43 loss induces cryptic 3'end processing in neurons and ALS brains - <i>Sam Bryce-Smith, UCL Queen Square Motor Neuron Disease Centre (United Kingdom)</i></p> <hr/> <p>3. Involvement of oligodendrocytes in Amyotrophic Lateral Sclerosis (ALS) and Frontotemporal Dementia (FTD) linked to Fused in Sarcoma protein (FUS) - <i>Marguerite Jamet, University of Strasbourg (France)</i></p> <hr/> <p>4. Hexanucleotide repeat expansions in C9orf72 alter microglial responses and prevent a coordinated glial reaction in ALS - <i>Philip Van Damme, University of Leuven (Belgium)</i></p> <hr/>	Ludo van den Bosch & Pascual Torres
14:40-15:10 hrs	Break	
15:10-16:20 hrs	<p>Session 2. Molecular Mechanism (Part II)</p> <p>Invited speaker: Ana Martínez - TDP43 cell-to-cell propagation in human sporadic ALS immortalized lymphocytes</p> <p>5. NEK1 loss-of-function mutation impairs ciliogenesis in iPSC-motoneurons – <i>Marta Nice Sorce, Istituto Auxologico Italiano (Italy)</i></p> <hr/> <p>6. CRISPR/Cas9 screen in human iPSC-derived cortical neurons identifies NEK6 as a novel disease modifier of C9orf72 poly(PR) toxicity - <i>Wenting Guo, KU Leuven-Stem Cell Institute (SCIL) (Belgium)</i></p> <hr/> <p>7. SIRT1 upregulation mitigates DPR induced toxicity in C9orf72-associated disease models - <i>Sophie Imhof, Medical University of Vienna (Austria)</i></p> <hr/> <p>8. TBK1 loss-of-function is associated with cell autonomous microglial dysfunction - <i>Uroosa Chughtai, Cardiff University (United Kingdom)</i></p> <hr/>	Susanna Petri & Ruben Lopez Vales
16:20-16:50 hrs	Break	
16:50-18:00 hrs	<p>Session 3. Proteomics</p> <p>Invited speaker: Janice Robertson - Title tbd</p> <p>9. Characterization of the human spinal cord synaptic proteome in ALS – <i>Zsofia Laszlo, University of Dundee (United Kingdom)</i></p> <hr/> <p>10. Characterising the cortical synaptic proteome of Amyotrophic Lateral Sclerosis (ALS) - <i>Nicole Hindley, University of Dundee (United Kingdom)</i></p> <hr/> <p>11. Multiomic profile integration reveals early disease signatures of Amyotrophic Lateral Sclerosis - <i>Paul Lingor, Technical University of Munich (Germany)</i></p> <hr/> <p>12. Early mechanisms of neurotoxicity associated with intercellular spreading of TDP-43 pathology - <i>Laura Rodríguez Gómez, Biodonostia Research Institute (Spain)</i></p> <hr/>	Caroline Ingre & Alberto Ortega Cano
18:00-19:30 hrs	Poster session 1 with wine and cheese	

Thursday 13-7-2023

Time	Session	Chair(s)
8:30-9:40 hrs	<p>Session 4. Genomics and Transcriptomics</p> <p>Invited speaker: Abraham Acevedo - Title tbd</p> <p>13. A Single-nuclei RNA Sequencing Approach of Oligodendrocyte Dysfunction in ALS - <i>Maria Georgopoulou, Leuven Brain Institute (LBI) (Belgium)</i></p> <p>14. Untangling the role of microRNAs in ALS pathogenesis via the iPSC-derived skeletal muscle in vitro model derived from C9ORF72-mutant patients - <i>Claudia Malacarne, RCCS Istituto Neurologico Carlo Besta (Italy)</i></p> <p>15. Sex-stratified analysis of ~133k samples identifies novel associations with Amyotrophic Lateral Sclerosis - <i>Ross Byrne, Trinity College Dublin (Ireland)</i></p> <p>16. Genome-wide methylation array reveals epigenetic drift and epivariations in ALS - <i>Alberto Brusati, University of Pavia (Italy).</i></p>	Janine Kirby & Russell McLaughlin
9:40-10:10 hrs	Break	
10:10-11:20 hrs	<p>Session 5. Therapeutics</p> <p>Invited speaker: Neil Snyder - New therapeutic landscape</p> <p>17. Assessment of the therapeutic effect of IGS 2.7, a CK1 protein kinase inhibitor, in combination with riluzol for the treatment of ALS - <i>Loreto Martinez-Gonzalez, CSIC (Spain)</i></p> <p>18. The MIROCALS Study: Efficacy of low dose IL2 in ALS and implications for ALS trial design - <i>Nigel Leigh, Brighton and Sussex Medical School (United Kingdom)</i></p> <p>19. Lys-acetylated PPIA as a candidate therapeutic target for TDP-43 proteinopathies - <i>Laura Pasetto, Istituto di Ricerche Farmacologiche Mario Negri IRCCS, (Italy)</i></p> <p>20. Neurofilament light chain response during therapy with Tofersen in SOD1-related ALS – treatment experience in clinical practice - <i>Thomas Meyer, Universitätsmedizin Berlin (Germany)</i></p>	Thomas Meyer & Angela Genge
11:20-11:50 hrs	Break	
11:50-12:35 hrs	<p>Debate. Early to market or Definitive evidence</p> <p>Speakers: Jinsy Andrews and Chris McDermott</p>	Leonard van den Berg
12:30-13:45 hrs	Lunch	
13:45-15:15 hrs	<p>Session 6. Neuropathology and applied clinical neuroscience</p> <p>Invited speaker: Andrea Malaspina - Emerging biomarkers and evidence from ALS clinical trials</p> <p>21. Metabolic Alterations precede Neurofilament Changes in Presymptomatic ALS Gene Carriers - <i>Johannes Dorst, University of Ulm (Germany)</i></p> <p>22. Disruption of the Angiopoietin-like protein system correlates with lipid homeostasis in ALS - <i>Sruthi Sankari Krishnamurthy, University of Ulm (Germany)</i></p> <p>23. High-resolution assessment of ALS neuropathology and its association with clinical presentation - <i>Anna Sanchez Avila, University of Dundee (United Kingdom)</i></p> <p>24. Investigating the role of autoantibodies against neurofilaments in amyotrophic lateral sclerosis (ALS) - <i>Ellie Sturme, Queen Mary University of London (United Kingdom)</i></p>	Ammar Al-Chalabi & Caco Vazquez

25. Lipid-mediated resolution of inflammation in amyotrophic lateral sclerosis informs on novel biomarkers and therapeutic targets - *Ozlem Yildiz, Queen Mary University of London (United Kingdom)*

26. Unsupervised machine learning identifies distinct molecular and phenotypic ALS subtypes in post-mortem motor cortex and blood expression data - *Heather Marriott, King's College London (United Kingdom)*

15:15-15:45 hrs Break

15:45-16:15 hrs **Basic research Rapid Fire (1/2)**

Philip van Damme & Miguel Angel Rubio

i) Deletion of endothelial TDP-43 disrupts the vascular barrier triggering inflammation and hemorrhages in the central nervous system - *Victor Arribas, University of Barcelona and Bellvitge Biomedical Research Institute (Spain)*

ii) Haploinsufficiency of C9ORF72 selectively impairs autophagy in C9ORF72-linked ALS - *Rim Diab, Inselspital University Hospital (Switzerland)*

iii) Elucidating the timing of TDP-43 related phenotypes using iPSC-derived motor neurons from TARDBP ALS patients - *Melissa Nijs, University of Leuven (Belgium)*

iv) Dynamic Translational Profile of Stressed iPSC-MNs from C9orf72-ALS Patients by Translating Ribosome Affinity Purification (TRAP) - *Yinyan Xu, University of Oxford (United Kingdom)*

v) MAM lipidome changes associated with TDP-43 dysfunction - *Anna Fernández Bernal, University of Lleida-IRB Lleida (Spain)*

vi) Gap junctions are functionally enhanced in iAstrocytes derived from C9ORF72 repeat expansion patients - *Iris Stefania Pasniceanu, University of Sheffield (United Kingdom)*

vii) Targeting De Novo Fatty Acid Synthesis as a Therapeutic Strategy to Alleviate Non-cell Autonomous Mechanisms in ALS - *Maddi Garciandia, Biodonostia Health Research Institute (Spain)*

viii) Epigenetic analysis on organoids for the study of Amyotrophic Lateral Sclerosis - *Eveljn Scarian, IRCCS Mondino Foundation (Italy)*

ix) Cognate microglia – T cell interaction induce neurotoxic T cell function in a fast-progressing C9orf72 ALS animal model - *Qihui Zhou, German Center for Neurodegenerative Diseases (Germany)*

x) An interaction between synapsin and C9orf72 regulates excitatory synapses and is impaired in ALS/FTD - *Claudia Bauer, University of Sheffield, (United Kingdom)*

xi) Cortical network dysfunction in ALS using task-free magnetoencephalography - *Michael Trubshaw, University of Oxford (United Kingdom)*

16:15-17:20 hrs **Session 7. Epidemiology**

Orla Hardiman & Markus Weber

27. Genetic and Environmental Risk Factors contribute in the pathogenesis of ALS in Cyprus - *Ellie Mitsi, The Cyprus Institute of Neurology and Genetics (Cyprus)*

28. Incidence, mortality and survival of patients with amyotrophic lateral sclerosis (ALS) in Belgrade, Serbia (1994-2018) - *Aleksa Palibrk, University Clinical Center of Serbia (Serbia)*

29. Presymptomatic geographical distribution of ALS patients suggests the involvement of environmental factors in the disease pathogenesis - *Rosario Vasta, University of Turin (Italy)*

30. Epidemiological Trends of Amyotrophic Lateral Sclerosis (ALS) in Ireland 1996-2021 - *Robert McFarlane, Trinity College Dublin (Ireland)*

31. Population-level penetrance of ALS genes is markedly reduced - *Andrew Douglas, Oxford University Hospitals NHS Foundation Trust (United Kingdom)*

32. Abstract presentation - tbd

17:20-17:50 hrs Break
17:50-19:00 hrs Poster session 2 with wine and cheese
19:30 hrs Pick up Gala Dinner
20:00 hrs Start reception
20:30 hrs Gala dinner

Friday 14-07-2023

Time	Session	Chair(s)
08:45-10:00 hrs	<p>Session 8. Applied Neurophysiology Invited speaker: Xavi Navarro - Electrophysiological tests as biomarkers for ALS experimental research</p> <p>33. Acceptability and feasibility of the MiNDToolkit intervention for management of behavioural symptoms in MND: the views of healthcare professionals - <i>Thando Katangwe-Chigamba, University of East Anglia (United Kingdom)</i></p> <hr/> <p>34. M50, CMAP50 and MUNIX200 are potentially new parameters to describe disease progression in Amyotrophic Lateral Sclerosis - <i>Annekathrin Roediger, Jena University Hospital (Germany)</i></p> <hr/> <p>35. Corticomuscular coherence in ALS during the performance of a motor task - <i>Saroj Bista, Trinity College Dublin (Ireland)</i></p> <hr/> <p>36. Classification of ALS Patients Based on Resting-state EEG Trajectories: Clinical Relevance and Network Progression" - <i>Marjorie Metzger, University of Dublin (Ireland)</i></p>	Roisin McMackin & Adolfo Lopez de Munain
10:00-10:40 hrs	<p>Translational and clinical rapid fire (2/2)</p> <p>xii) isomiRs - a novel family of molecular biomarkers for ALS prognostication - <i>Yahel Cohen, Weizmann Institute of Science (Israel)</i></p> <hr/> <p>xiii) Performance of serum neurofilament light chain in a wide spectrum of clinical courses of ALS – a cross-sectional multicenter study - <i>Thomas Meyer, Universitätsmedizin Berlin (Germany)</i></p> <hr/> <p>xiv) Ultrasound-mediated blood–spinal cord barrier opening prolongs survival in an ALS mouse model - <i>Ilyes Aliouat, Sorbonne Université (France)</i></p> <hr/> <p>xv) Motor system connectivity in ALS: A corticomuscular magnetoencephalography study - <i>Katie Yoganathan, University of Oxford (United Kingdom)</i></p> <hr/> <p>xvi) Dysfunction Of Cortical Inhibitory Interneurons In Amyotrophic Lateral Sclerosis - <i>Cristina Benetton, Sorbonne Université (France)</i></p> <hr/> <p>xvii) Nerve excitability disentangled: hyperexcitability in ALS is driven by altered slow potassium channel kinetics - <i>Diederik Stikvoort Garcia, University Medical Center Utrecht (The Netherlands)</i></p> <hr/> <p>xviii) Social Cognition Impairment in Amyotrophic Lateral Sclerosis - <i>Sara Kadenšek, University Medical Centre Ljubljana (Slovenia)</i></p> <hr/> <p>xix) Motor band sign is a specific marker of ALS and corresponds topographically to motor symptoms - <i>Charlotte Zejlou, Karolinska University Hospital (Sweden)</i></p> <hr/> <p>xx) Investigating cognitive endophenotypes and presymptomatic cognition in unaffected relatives of familial ALS patients: a longitudinal study - <i>Colm Peelo, Trinity College Dublin (Ireland)</i></p> <hr/> <p>xxi) Cortical network dysfunction in ALS using task-free magnetoencephalography - <i>Michael Trubshaw, University of Oxford (United Kingdom)</i></p>	Adriano Chio & Anna Calvo
10:40-11:10 hrs	Break	

11:10-11:55 hrs **Young Investigator Awards**

Ammar Al-Chalabi

11:55-13:15 hrs **Session 9. Pre-symptomatic phenotype and cognition**

Raquel Sánchez del Valle & Ratko Radakovic

Invited speaker: Caroline McHutchinson - The temporal course of cognitive and behavioural changes in Motor Neuron Diseases

37. Phenocconversion of asymptomatic genetic mutation carriers to ALS/FTD: a longitudinal neuroimaging study - *Kevin van Veenhuijzen, University Medical Center Utrecht (The Netherlands)*

38. Investigation of cognitive networks in asymptomatic C9orf72 repeat expansion carriers using high-density EEG - *Stefan Dukic, University Medical Center Utrecht (The Netherlands)*

39. Cognitive impairment and capacity to consent to clinical trials in ALS - *Debbie Gray, University of Edinburgh (United Kingdom)*

40. Premorbid brain structural variation influences risk of ALS - *Alexander Thompson, University of Oxford (United Kingdom)*

41. Brain “neurovascular coupling” in amyotrophic lateral sclerosis: the link with cognitive impairment - *Minoo Sharbafshaaer, Università degli Studi della Campania Luigi Vanvitelli (Italy)*

13:15-13:30 **Closing: next ENCALS meeting + prizes**

13:30 hrs Lunch