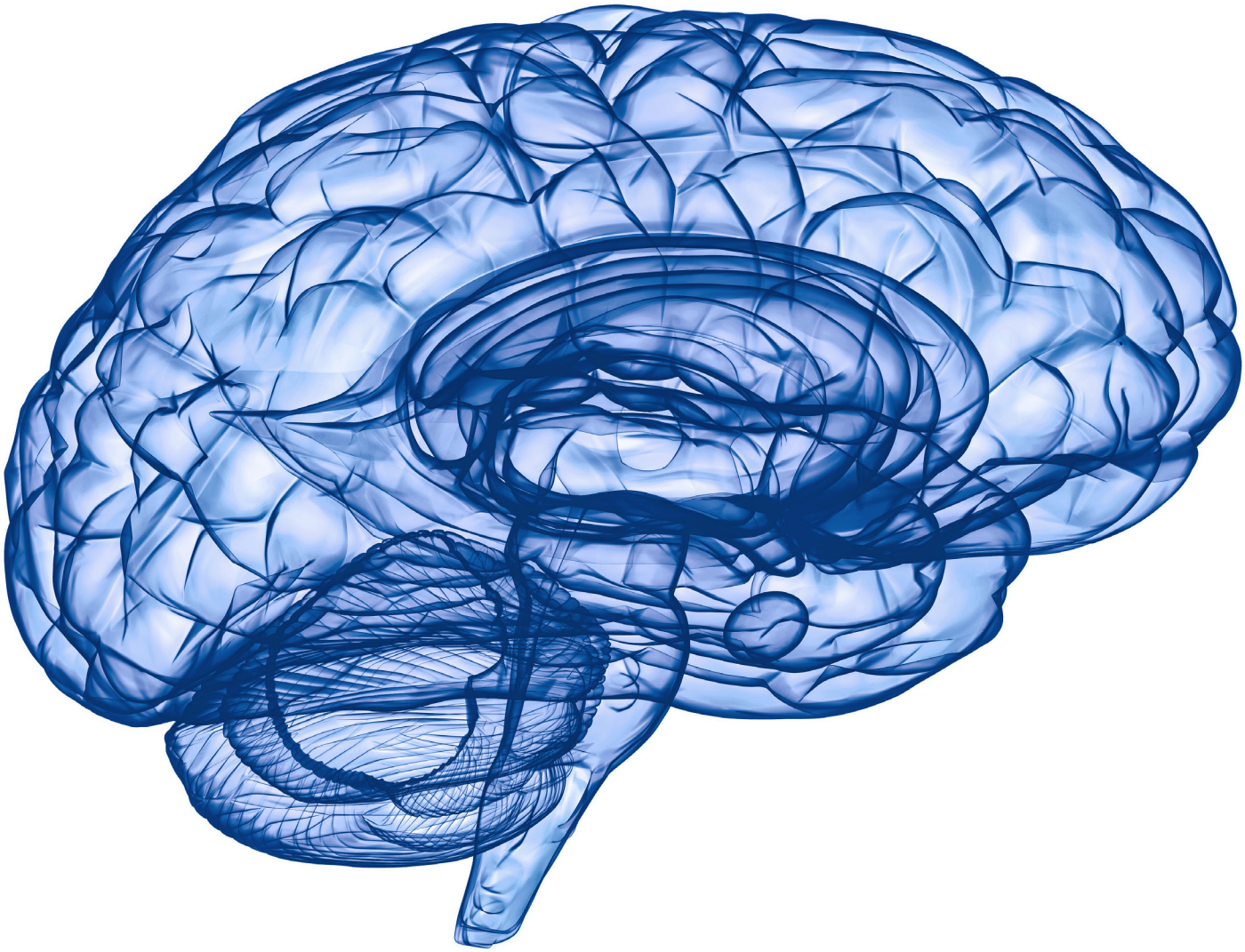
AUS & NZ MND Research Symposium



Symposium Schedule

April 28th-30th, 2022

Royal Brisbane and Women's Hospital Education Centre

FIGHT MND. IT TAKES PEOPLE

mnd Research Australia

DAY 1: April 28th, 2022

9:30 Registration & Morning tea

Session 1

MND Care and Research; now and into the future

Chairs: Rebecca Sheean & Gethin Thomas

10:30 Welcome to Country

10:35 Welcome on behalf of the MNDRA and FightMND; Fiona McIntosh

10:40 Address by Local Delegate

10:50 A Personal Perspective (PLEX); Mel Syron

11:00 MND Collective overview; Rebecca Sheean

11:15 An innovative approach to patient management, clinical trials, and evidence-based policy development, is required to provide coordinated, personalised care and find an effective treatment for Motor Neurone Disease (MND); Matthew Kiernan

11:30 An Overview of New Zealand Motor Neurone Disease Research Strategy; Claire Reilly

11:45 MNDSA Clinical Pathway and Referral Network; Tracey Watters

12:00 SALSA; Anjali Henders

12:15 Panel discussion

12:30 Lunch - Sponsored by *Illumina*

Session 2

Advancing MND research to understand the causes of MND

Chairs: Bradley Turner & Sarah Kerwin

1:20	Probing the integrity of interneuronal inhibitory circuits in ALS with TMS-EEG; Mehdi Van den Bos
1:32	Altered SOD1 maturation and post-translational modification in post-mortem familial and sporadic ALS spinal cord; Benjamin Trist
1:44	Arginine-rich C9orf72 ALS proteins stall ribosomes in a manner distinct from canonical ribosome-associated quality control substrates; Danny Hatters
1:56	Validation of the GGNBP2 gene as an ALS risk factor using Drosophila: links to synaptic development and autophagy; Sarah K. Kerwin
2:08	Characterising myelin structure and composition using a combination of human post-mortem tissue and patient iPSC-derived spinal cord organoids; Samantha Barton
2:20	Ablation of free fatty acid receptor 2 (FFAR2) signalling accelerates early disease progression in the SOD1G93A mouse model of MND; John Lee
2:32	Q&A; All speakers
3:00	Afternoon tea

Session 3

Rapid Fire Talks: Preclinical studies in MND

Chairs: Sarah Rea & John Lee

3:30	A copper chaperone-mimetic polytherapy for SOD1-associated amyotrophic lateral sclerosis; Victoria Shephard
3:36	Polytherapy for the treatment of familial SOD1 ALS; Jeremy S. Lum
3:42	Effects of antiretroviral therapy on motor behaviour, TDP-43 proteinopathy and immune response in a motor neuron disease mouse model; Megan Dubowsky
3:48	A high-throughput flow cytometry drug screen to discover new treatments for motor neurone disease; Nicholas Geraghty
3:54	ALS monocyte-derived microglia-like cells reveal cytoplasmic TDP-43 accumulation, DNA damage, and cell-specific impairment of phagocytosis associated with disease progression; Anthony White
4:00	Glucose dyshomeostasis in the SOD1G93A mouse model of MND; Tanya McDonald
4:06	Investigating the role of calpain cleavage as an early pathogenic mechanism in mouse models of Machado Joseph disease and motor neuron disease; Katherine Robinson
4:12	Developing scalable and rapid human iPSC-derived neuron models to investigate TDP-43 pathology; Matisse Jacobs
4:18	Validating Bruton's Tyrosine Kinase (BTK) as a druggable therapeutic target for Motor Neuron Disease; Sara Jose
4:24	Developing new viral-mediated mouse models of TDP-43 Pathology; Heledd Brown-Wright
4:30	Sarm1 knockout modifies biomarkers of neurodegeneration and spinal cord circuitry but not disease progression in the mSOD1G93A mouse model of ALS; Sharn Perry
4:36	MND muscle fails to respond to motor neuron pro-synaptic signals to form postsynaptic specializations; Peter Noakes
5:00	Poster Presentations and Welcome drinks Even numbered posters 5 pm - 5:45pm Odd numbered posters 5:45 pm - 6:30pm
7:00	Day 1 concludes

Day 2: April 29th, 2022

9:00 Registration

Session 4

Recent discoveries on the role of TDP-43 in the pathogenesis of MND

Chairs: Emma Scotter & Adam Walker

09:30 Non-biased identification of new modulators of MND-associated TDP-43 aggregation; Rebecca San Gil

09:42 miR-23a suppression accelerates functional decline in the rNLS8 mouse model of TDP-43 proteinopathy; Aaron Russell

09:54 pTDP-43 pathology-associated increase in microglial CD68 expression in human Amyotrophic Lateral Sclerosis; Molly Swanson

10:06 In vivo characterisation of human TDP-43 reveals a critical role for posttranslational modifications for condensate formation and aggregation; Marco Morsch

10:18 Linking TDP-43 pathology, motor cortex hyperexcitability and motor neuron demise in ALS; Catherine Blizzard

10:30 Q&A; All speakers

10:50 Morning Tea

Session 5

Fostering treatment development and clinical trials/biomarkers in MND

Chairs: Cathy Blizzard & Allan McRae

11:20	Lipid profiles in blood of mutant SOD1 mice have diagnostic, progressive and pharmacodynamic biomarker properties; Sophia Luikinga
11:32	Comparative RNA-seq reveals upregulated tissue generation in skeletal muscle of amyotrophic lateral sclerosis cases to controls; Anna Freydenzon
11:44	The 1H-MRS Metabolite Signature of Cortical Hyperexcitability in ALS; Sicong Tu
11:56	Systemic central nervous system delivery of therapeutic antisense oligonucleotides with blood-brain barrier crossing peptides; Fazel Shabanpoor
12:08	A multimodal, nerve-muscle combination therapy strategy for MND; Peter Crouch
12:20	Q&A; All speakers
12:40	Lunch

Session 6

Enhancing clinical research and improving quality of life/clinical trials in MND

Chairs: Susan Mathers & Frederik Steyn

1:30	Grief, depression and anxiety in bereaved caregivers of people with Motor Neurone Disease: A population-based national study; Samar Aoun
1:42	Online Carer's Questionnaire (OCQ) Behaviour Screen; Amelia Ceslis
1:54	Polysomnographic titration of non-invasive ventilation in motor neurone disease (3TLA): Study protocol for a randomised controlled trial; Abbey Sawyer
2:06	Neck Weakness in MND/ALS: An Investigation of Prevalence and Physiotherapy Management - A Retrospective Descriptive Study; Trinh Sia
2:18	NIV@Home: A pilot randomised controlled trial comparing home-based versus day admission models of non-invasive ventilation (NIV) implementation; David Berlowitz
2:30	Lung volume recruitment therapy in people with motor neurone disease and slowly-progressive neuromuscular disease: a randomised controlled trial; Nicole Sheers
2:42	Q&A; All speakers
3:00	Afternoon tea

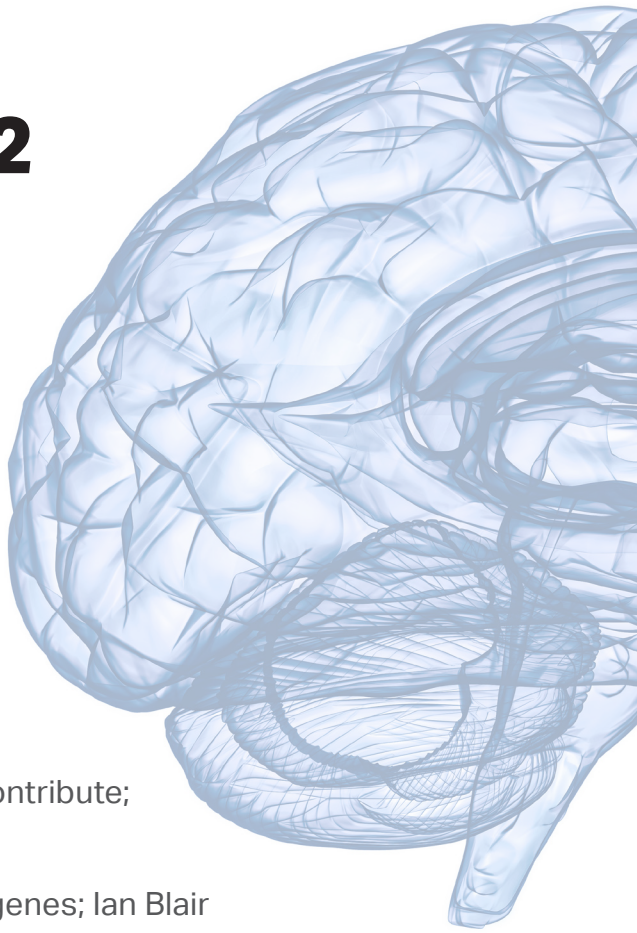
Session 7

Rapid Fire Talks: Patient-focussed studies in MND

Chairs: Colin Mahoney & Kelly Williams

3:30	Towards quantitative measurements of iron in the spine and brain in MND using Magnetic Resonance Imaging; Thomas Shaw
3:36	Comparison of hip- and wrist-worn actigraphy for assessing functional decline and disease progression in patients with MND; Cory Holdom
3:42	Uncovering Predictive Urinary Biomarkers for Motor Neuron Disease; Mary-Louise Rogers
3:48	Low Hypothalamic Volume with Low BMI is Associated with Shorter Survival in Patients with ALS; Jeryn Chang
3:54	Hypermetabolism is not associated with increased levels of cytokines in patients with ALS; Stephanie Howe
4:00	Familial ALS-associated SFPQ variants promote the formation of SFPQ cytoplasmic aggregates that reduce surface AMPA receptor expression in primary neurons; Victor Anggono
4:06	Functional characterisation of the amyotrophic lateral sclerosis risk locus GPX3/TNIP1; Fleur Garton
4:12	Rare short tandem repeat expansions present in Australian sporadic ALS and FTD cases; Lyndal Henden
4:18	Genetics of Motor Neuron Disease in New Zealand; Emma Scotter
4:24	Leveraging cryptic relatedness for gene discovery in Australian and New Zealand ALS and FTD cohorts; Kelly L. Williams
4:30	Assessing the quality of evidence in studies aiming to improve the psychological well-being (PWB) of MND carers: Results of a systematic review of carer interventions; Paul Cafarella
4:36	Opportunities to enhance participation in psychological interventions for people with motor neurone disease and their family caregivers: Important considerations for service implementation; Sarah Velissaris
4:42	Q&A; All speakers
5:00	Presentation and Poster Awards
5:10	Closing Remarks; David Ali
5:20	Day 2 Concludes
7:00	Conference Dinner; MND and ME

Day 3: April 30th, 2022



9:00 Arrival and Morning tea

10:30 Welcome on behalf of FightMND and MNDRA; David Ali

10:35 Lived Experience Insights – what do we want from research?; Sean Dorney

Session 1

Causes and biology

10:45

1. The MiNDAUS Registry-manage, share, contribute; Catherine Hansen
2. MND Triggers – The environment versus genes; Ian Blair
3. We hear a lot about TDP43 – what is it, what does it do and how can we target it for treatments?; Fiona Bright
4. Panel Discussion

12:15 Lunch

Session 2

Treatment and Care

13:15

1. Current trials in Australia and their respective stages. What does the MND trial pipeline look like?; Colin Mahoney
2. Genetic counselling; Vrunda Sane
3. Prism - an app to help organise your MND logistics; Jane Milne
4. Compassionate Communities: Supporting those caring, dying and grieving; Samar Aoun
5. Panel Discussion

15:15 Closing remarks; Fiona McIntosh

15:30 Meeting Close