Abstract Number	Submission Title
	POSTER SESSION 1: OCTOBER 8, 4:30-6:30 PM ET
	NEALS 30TH ABSTRACT
	The Gupta Family Endowed Prize for Innovation in ALS Care
	Drs. Ayeez and Shelena Lalji & Family Student Scholar Award for Repair and Regenerative Mechanisms in ALS
1	RNS60 Protects Neuromuscular Junctions in the Diaphragm Muscle of TDP-43 Associated Amyotrophic Lateral Sclerosis
2	Presymptomatic gene expression changes in motor neurons in a large animal model of motor neuron degeneration
3	microRNA-206 is a reproducibly sensitive and specific plasma biomarker of amyotrophic lateral sclerosis
4	NfL in the NFL: A Prospective Longitudinal Study of Neurofilament Light Chain as a Biomarker of Neurological Injury in Professional Football Players.
5	Novel ESR-Based Blood Test for Early ALS Diagnosis Through SOD1 Structural Analysis
6	Phenotypic Drug Screening in Human iPSC-Derived Neurons Identifies Modifiers of Dipeptide Repeat-Induced Toxicity and TDP-43 Pathology in Amyotrophic Lateral Sclerosis/Frontotemporal Dementia
7	Chloroviruses and ALS
8	Discovery and characterisation of a novel inhibitor of the Mitochondrial Permeability Transition Pore in preclinical models of ALS
9	ALS-associated circular RNA hsa_circ_0000119 forms a ribonucleoprotein complex enriched with proteins central to ALS pathophysiology
10	Investigation of Cortical Hyperexcitability in the Sporadic Form of TDP-43 Pathology Using High-Density Multielectrode Array System
11	Characterizing the CSF Biomarker Signature of Calpain-2 Activity in ALS and the Biomarker Impact of Calpain-2 Inhibition in a Preclinical Model of ALS
12	Exploratory Post Hoc Analysis of Neutrophil-to-Lymphocyte Ratio as a Novel Responsiveness Biomarker for Edaravone Oral Suspension-Treated Patients With Amyotrophic Lateral Sclerosis vs Untreated Propensity Score-
13	Electrical Impedance Myography Via the Myolex mScan as an ALS Disease Progression Biomarker: Early Results from the ElectricALS Study
14	Dysregulated RNA Transcripts as Blood Biomarkers of ALS
15	Incorporating Serum Neurofilament Light Chain into ALS Diagnostic Criteria
16	Neurofilament proteoforms in amyotrophic lateral sclerosis are different in cerebrospinal fluid and blood
17	An Exploration of Serum Neurofilament Light Chain and Rate of ALSFRS-R Decline
18	Longitudinal trajectories of Change of Neurofilament Light Chain in the Answer ALS Cohort
19	Neurofilament Light Chain Reflects Clinical and Genetic Heterogeneity in a Real-World ALS Cohort
20	Hypermetabolism is common among symptomatic and asymptomatic C9orf72 pathogenic variant carriers and is associated with elevated neurofilament light chain levels
21	Predicting ALS survival using combined ALSFRS-R slope and NfL: insights from the ALS/MND Natural History Consortium's data and biofluid collection study.
22	Platelet Proteomics to Identify Novel Biomarkers and Mechanistic Insights in ALS
23	Characterizing Microbial Markers Predictive for ALS Onset and Progression
24	Access to ALS and FTD biospecimens via NINDS-supported biospecimen repository, BioSEND
25	The Accelerating Medicines Partnership® in Amyotrophic Lateral Sclerosis (AMP® ALS)
26	Northeast Amyotrophic Lateral Sclerosis (NEALS) Biorepository

27	Design and Operationalization of the PREVENT ALL ALS Genetic Testing Sub-Study
28	The ANSWER ALS Foundation: Advancing ALS Research Through Strategic Collaboration and Innovation
29	ASSESS ALL ALS: A longitudinal, multi-modal natural history study to characterize ALS disease progression using on-site and remote cohorts
30	PREVENT ALL ALS: Design for a national ALS gene carrier natural history study
31	The Robert Packard Center for ALS Research: 25 Years of Funding Global Collaborative Pre-Clinical Research
33	Target ALS Multi-Center Human Postmortem Tissue Core
34	ALS cervical cord MRI metanalysis shows flattening of the cervical enlargement region.
35	Multicenter imaging study in ALS to demonstrate scalability and clinical trial readiness of multimodal MRI:
36	Preliminary data  Correlation of Quantitative Susceptibility Mapping with Upper Motor Neuron Dysfunction, Motor Function, and Demographics in Patients with PLS and ALS
37	Toward Comprehensive Remote Assessment of ALS Patients: Combining Objective Digital Measures with
38	Patient Reports of Problems  Reducing Sample Size and Duration of ALS Clinical Trials Using Objective Speech-Based Digital Biomarkers
39	Evaluating the Precision of Quantitative Voice Characteristics as Endpoints in ALS Clinical Trials
40	Leveraging Integrated Digital Infrastructure to Modernize Remote-Enabled ALS Research: Lessons from the ALL ALS study
41	ALS genetic risk predictions using Kolmogorov Arnold Networks
43	Quantifying Ambulation in ALS Using Wearable Sensor-Derived Digital Outcomes
44	Accelerating ALS Drug Approval using Digital Health Technologies: Findings from the ADDS 2025 ALS Workshop
45	Quantifying upper limb function in ALS using wearable sensors during short prescribed exercises
46	Design of Digitize ALL ALS: A Wearable Sensor Sub-Study in the ALL ALS Consortium
47	Simultaneous bimanual neural control of two cursors by person with tetraplegia with microelectrode arrays in bilateral precentral gyri.
48	Rationale for digital health technology assessments in FUNCtion ALS, a Phase 1/2 trial of TRCN-1023, an antisense oligonucleotide restoring UNC13A, in adult persons with Amyotrophic Lateral Sclerosis
49	Mobile EEG Meets Generative Al: Benchmarking a Conversational BCI Across ALS and Control Cohorts
50	NeuroCHARTS™: A Data-Driven Platform to Streamline Clinical Trial Recruitment
51	Facial Stimulus based Virtual Environment BCI for At Home Use in ALS
52	A multisensory evoked potential brain-computer interface for amyotrophic lateral sclerosis (ALS)
53	Monitoring Neural Correlates of Cognitive Decline in ALS
55	Investigating the Relationship Between Cervical Flexor Strength and Tongue Strength in Individuals with Amyotrophic Lateral Sclerosis: A Retrospective Review
56	Oral Health and Hygiene in ALS: An Unmet Clinical Need
57	Real time Upper Airway Visualization to Improve Tolerance and Adherence to Mechanical Insufflation- Exsufflation in ALS: A Case Study
58	Preliminary Results of Combined Respiratory Training to Improve Pulmonary and Cough Function in individuals with ALS
59	Toward Automated Cranial Nerve Exam (CNE): Deep Learning-Based Tongue Segmentation in ALS
60	Multimodal AI for ALS Bulbar Severity Tracking: A Task and Feature Optimization Approach

61	Evaluation of an augmented reality eye-tracking headset for communication in patients with ALS
62	Oral Secretion Scale (OSS) - A Multi-National Validated Clinimetric Scale for Assessing State of Secretion Management in NIV-treated ALS Patients Identifies Differences in Secretion Management Device and
	The Presence of Constipation in Amyotrophic Lateral Sclerosis and Correlation with Disease Characteristics
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64	Gastrointestinal Symptoms in ALS: Evidence for Enteric Nervous System Involvement and Clinical Implications
65	Evaluation of GI tolerance of milk protein- versus plant protein-based enteral nutrition formulas in people with amyotrophic lateral sclerosis (ALS): A multi-site retrospective study
66	Factors of Confidence and Regret in Feeding Tube Decision-Making for People Living with Amyotrophic Lateral Sclerosis
67	Feeding Tube Placement: An Interdisciplinary Approach
68	Is the MIND diet feasible for people living with ALS? A 7-week pilot study of an educational dietary intervention
69	Investigation of the Timing of Enteral Nutrition Initiation in patients with tracheostomy invasive ventilation (TIV)
71	Improving NIV Use in ALS: A Collaborative Approach to Enhancing Tolerability and Adherence
72	The Delta FVC: A potential clinical outcome measure to predict rate of ALS progression
73	A yogic breathing program to enhance quality of life in people with amyotrophic lateral sclerosis: A mixed-methods pilot study
74	Multicenter Prospective Validation of a Clinical Prediction Tool for Respiratory Insufficiency in ALS: The Pennsylvania Amyotrophic Lateral Sclerosis Cohort Study
75	Smartphone Application-Mediated, Supervised, At-Home Telespirometry Identifies Statistically Significant Differences in Erect and Supine Slow Vital Capacity and ALSFRS-R Decline as a Function of Non-invasive
76	At-Home Telespirometry Identifies Significantly Slower Decline of ALS Functional Rating Scale-Revised Total Score but not Erect/Supine Slow Vital Capacity in Edaravone-Treated ALS Subjects Not Requiring Non-Invasive
77	Assessment of Spirometry Testing Using a Mask for Patients With ALS
78	Smartphone Application-Mediated, Respiratory Therapist-Supervised, At-Home Telespirometry Erect/Supine Slow Vital Capacity Measurements in Subjects With ALS: Patient-Reported 5-Item Likert Scale Feasibility and
79	Predictors of Pneumonia in Motor Neuron Disease: An Exploratory Retrospective Analysis
81	Thick Secretions in ALS: What Patients Say
82	Cognitive and Behavioral Impairment in ALS: Associations with Survival and Supportive Intervention Uptake
83	Depression as a Predictor of ALS Progression and Study Adherence
84	Loneliness in ALS: An Exploration of Communication and Mobility Factors
85	Development and Preliminary Validation of an ALS-Specific Fatigue Rating Scale
86	A Web-based Survey on Lower Urinary Tract Symptoms in Amyotrophic Lateral Sclerosis
87	Clinical Decision-Making in Amyotrophic Lateral Sclerosis Rehabilitation: A Physical Therapy Practice Pattern Survey
88	Caring for the Homebound Patient with ALS
89	Preliminary Outcomes of Early Neuromuscular Rehabilitation in SOD1 ALS Patients Receiving Tofersen: A 6-Month Observational Study
90	Impact of Assisted Foam Rolling on Lower Limb Performance in Advanced ALS: A Case Report
91	Design of a minimal neck brace for pALS with Dropped Head Syndrome
92	Perspectives of Persons Living with ALS: A Thematic Analysis Across Clinical and Psychosocial Domains
93	A Report on the Relationship Between ALS Diagnostic Delay and Depression/Anxiety Symptoms

94	Cognitive Compass: Guiding ALS Patient Care with Interdisciplinary Neuropsychology
95	Informants (Study Partners) in presymptomatic FTD/ALS Research: Highlighting uncharacterized and uncommunicated potential risks
96	Navigating Complex Conversations in ALS
97	Exploring Palliative Care Needs in Amyotrophic Lateral Sclerosis. Perspectives from Patients and Caregivers: A Scoping Review.
98	A Novel Exploration of Sexual Behavior and Intimacy in Amyotrophic Lateral Sclerosis: One-Year Study Update
135	Unprecedented Progression of fALS with SOD1 and PFN1 Mutations: A Novel Case Report
99	Characteristics and Disease Burden of People With Amyotrophic Lateral Sclerosis in a United States-Based Population: Analysis of Real-World Data
100	Primary Reasons for Emergency Room Visits and Discharge Dispositions in Patients with Amyotrophic Lateral Sclerosis (ALS) at the Massachusetts General Hospital
101	Exploring Pain Management Procedures for Musculoskeletal Issues in Patients with Amyotrophic Lateral Sclerosis (ALS): A Retrospective Chart Review
102	Tofersen-associated Radiculitis in SOD1-ALS Effectively Managed with IV but not IT Corticosteroid Administration
103	Radiological characterization of tofersen-associated myelitis: a case report
104	The VITALS Trial: Comparing the Impact of Video Integration to Traditional Amyotrophic Lateral Sclerosis Visit  Communication on Patient and Caregiver Quality of Life
105	The Feasibility and Acceptability of Sharing Video Recordings of Amyotrophic Lateral Sclerosis Clinical Encounters With Patients and Their Caregivers: Pilot Randomized Clinical Trial
106	A Pilot Study of Remotely-Administered Cognitively-Based Compassion Training (CBCT®) for People Living with ALS (pALS) and their Care Partners
	POSTER SESSION 2: OCTOBER 9, 4:20-6:20 PM ET
	NEALS 30TH ABSTRACT
	The Gupta Family Endowed Prize for Innovation in ALS Care
	Drs. Ayeez and Shelena Lalji & Family Student Scholar Award for Repair and Regenerative Mechanisms in ALS
32	The Cures Collective: A Cross-Disease Movement to Transform the Neurodegenerative Landscape
54	Updated Validation Evidence for Clinical Bulbar Assessment Scale (CBAS)
107	Exploring and Boosting Hope in ALS
108	Diagnostic Journey in a United States-Based Population of People With Amyotrophic Lateral Sclerosis: Analysis of Real-World Data
109	Clinical Phenotype Predicts Amyotrophic Lateral Sclerosis (ALS) Prognosis More Accurately than Region of Onset: A Retrospective Time-to-Event Analysis
110	Characterizing Dietary Supplement Use Among Individuals with ALS
111	ALSUntangled Program
112	The Usability of a VR Serious Training Game for Empowering ALS Patients
113	Proportion of Parents and Grandparents among Adults with ALS in a Multidisciplinary ALS Center
114	Improving Attitudes Towards Palliative Care: A Quality Improvement Project
115	A Community-Informed Approach to Assessing the Needs of People Living with ALS and Their Care Partners
116	Exploring Predictive Genetic Testing Protocols Across Adult-Onset Neurodegenerative Conditions
117	Supporting People with ALS in Seeking Genetic Testing: Impact of an Online Educational Decision Tool

118	Amyotrophic lateral sclerosis estimated prevalence cases from 2022 to 2030, data from the National ALS Registry
119	Amyotrophic Lateral Sclerosis as a Multistep Process: a Population-based Study from the National ALS Registry
120	Place of death in patients with motor neuron disease and the association with comorbidities during the COVID- 19 pandemic: a population-based analysis
121	Are Plateaus Common? A Multicenter Real-World Retrospective Analysis
122	Racial Disparities in ALS Diagnostic Delay: A Comparison Between Illinois and California
123	The incidence and prevalence of amyotrophic lateral sclerosis among people with diabetes mellitus are increasing in the United States
124	An Interactive Dashboard for Dynamic Individualized Prediction Models for Times-to-Event in ALS Clinical Milestones
125	Time-to-event analysis of clinical milestones in the ALS/MND Natural History Consortium Dataset
126	Design Language for Study-Specific Charts and Clinical Tools for ALS Patient Profiling
127	Documenting Financial Burden Concerns in an ALS Multidisciplinary Clinic
128	Provider Perspectives on Financial Burden in a Multidisciplinary ALS Clinic
130	Anti-IgLON5 disease, an Underrecognized Mimicker of Bulbar-Onset Motor Neuron Disease: A Case Series from Massachusetts General Hospital ALS Multidisciplinary Clinic
131	A Case of SPG-11 Associated Juvenile ALS with Thin Corpus Callosum
132	ClClinical Spectrum of FUS-Associated ALS: A Single-Center Experience from Turkey
133	Clinical Course of FUS-ALS: A Retrospective Analysis of Clinical and Genetic Modifiers
134	Clinical Manifestations and Disease Trajectory of C9orf72-Associated ALS Spectrum Disorders In A Single- Center Indian Cohort
136	Factors Contributing to Survival among Veterans with ALS: Results from the VA Spinal Cord Injuries & Disorders Registry
137	Complementing the Spinal Cord Injuries & Disorders Registry (SCIDR) with local clinical records to better understand factors affecting disease progression at one Veterans Affairs medical center
138	The Effects of Glucagon-Like Peptide-1 Receptor Agonists Medications on Amyotrophic Lateral Sclerosis
139	Riluzole and Edaravone in ALS: Examining Real-World Use and Discontinuation
140	Differential impact of riluzole use on incident versus prevalent cases in the ALS/MND Natural History Consortium Dataset
141	Evaluation of Long-Term Prognosis of Edaravone in ALS Patients: A Real-World Comparative Study Using SUNRISE Japan and JaCALS Registry Data
142	Safety Data Summarizing 3 Years of Radicava ORS® (Edaravone) Using Postmarketing Pharmacovigilance From United States-based Patients With Amyotrophic Lateral Sclerosis
143	Understanding the use of Patient-Reported Outcome Measures in Primary Lateral Sclerosis: Insights from a Clinical Setting
144	Startle Reflex in Primary Lateral Sclerosis (PLS): A Comparison with Amyotrophic Lateral Sclerosis (ALS)
145	Exploring mobility patterns in three individuals with primary lateral sclerosis using smartphone-based digital phenotyping
146	Discovery of novel phosphosites in hSOD1-G37R preclinical models correlating with the efficacy of Borsantrazole, a novel edaravone analogue
147	Introducing Borsantrazole: A trifunctional boron-based pyrazole increases survival and delays disease onset in the SOD1-G37R mouse model of ALS
148	NU-9 treatment reduces the levels of mitochondrial DNA in the plasma of TAR4/4 sporadic ALS model with TDP-43 pathology
149	NU-9, in combination with other FDA-approved drugs, have better outcomes in models of TDP-43 pathology
150	Talineuren (TLN): A GM1-Loaded Nanoliposomal Therapeutic Targeting Mitochondrial Dysfunction and Proteostasis in ALS

151	ACE-2223, a novel oral small molecule for non genetically modified ALS, treats both gain- and loss-of-function TDP-43 pathology, extends survival and decreases NfL in vivo and has a favorable preclinical safety profile
152	Baseline characteristics and analysis of misfolded SOD1 target levels in a Phase 2 proof-of-concept study to evaluate the human antibody AP-101 in sporadic ALS and genetically determined SOD1-ALS
153	Preclinical Characterization of NUZ-001: A Brain-Penetrant Small Molecule that Reduces TDP-43 Aggregation in ALS Models
154	Engaging Diverse Voices, Shaping Trials: Integrating Patients and Caregivers into ALS Clinical Trial Design
155	Accelerating Study Start-up in Two Multi-Site Intermediate-Size Expanded Access Protocols Through a Collaborative Approach of a Comprehensive Academic Research Organization
156	Voice Recording Adherence in ALS: A Comparison of In-Clinic and At-Home Assessments
157	From Awareness to Enrollment: Navigating Patient Challenges to Improve Access to ALS Clinical Trials
158	Leveraging External Controls from PRO-ACT for Exploratory Efficacy Assessment in Early-Phase ALS Trials
159	Adverse Events: Disease Progression vs Reversible Effects in ALS
160	Leveraging Artificial Intelligence and Machine Learning for Extraction of Laboratory Reports
161	The NeuroPRO™ People-Reported Outcomes Platform, from Concept to Implementation: A Year in Review
162	Development and Validation of the Amyotrophic Lateral Sclerosis-Health Index (ALS-HI), a Novel, Regulatory- Grade, Patient-Reported Outcome Measure
163	Optimizing Trial Success: Key Staffing Considerations for Platform Trials
164	Enhancing ALS Trial Efficiency with Plasma NfL and Digital Twins
165	Optimizing Investigational Product Distribution in Clinical Trials: A Predictive Platform for Inventory and Delivery Management
166	Comprehensive Profiling and Collaborative Integration to Unveil ALS Mechanisms
167	Target ALS Natural History Study in a Global ALS Population
168	Clinical Trial Readiness: Using the FTD Disorders Registry to Identify FTD-ALS Participants for Research
169	Advancing EDC Systems with Al-Driven User Assistance via Azure-OpenAl Integration
170	ALL ALS Consortium: A Centralized Participant-Interest Form and Patient Navigation Workflow to Increase Recruitment and Remote Participation
171	Integrating Lived Experience: A Framework for Patient Advisory Boards in ALS Research
172	Variability of ALSFRS-R scores using multiple evaluators in the HEALEY ALS Platform Trial
173	Dual Coordination Centers role in ALL ALS Consortium: A Success Story, Not Too Many Cooks in the Kitchen
174	Legal and Regulatory Framework for Data Sharing
175	Efficient Site Contracting Enables Accelerated Study Start-Up of Two Multi-site Intermediate-Size Expanded Access Protocols
176	Utilizing Global Unique Identifiers for Data Deduplication and Extension of Longitudinal Datasets
177	Integrated Assessment of Function and Survival in ALS Trials: Comparative Evaluation of Rank-Based and Joint-Model Approaches in the HEALEY Platform
178	Enabling Al-Driven Research in ALS/MND through Data Standardization and Harmonization
179	A Comparison of Baseline Clinical Characteristics Between Decentralized and Institutionally-Enrolled Participants in the CNM-Au8 EAP04 Study
180	Neural Repair Reagent ALT001 Can Efficiently Treat Amyotrophic Lateral Sclerosis (ALS), From Bench to Clinic
181	Tofersen further slows ALS progression in a slowly progressive Glu101Lys family

A Phase 1/2, Multicenter Study to Evaluate the Safety, Tolerability, and Exploratory Efficacy of Intrathecally Administered Gene Therapy AMT-162 in Patients with SOD1 Amyotrophic Lateral Sclerosis (SOD1-ALS)
FUNCtion ALS: A Phase 1/2 trial evaluating the safety, tolerability, pharmacokinetics, pharmacodynamics and exploratory efficacy of TRCN-1023, an antisense oligonucleotide restoring UNC13A, in adult persons with
SARM1 inhibitor LY3873862 as neuroprotective treatment in ALS: Design of a proof-of-concept trial regimen in the HEALEY ALS Platform Trial
Safety, Tolerability, and Pharmacokinetics of ATH-1105 in Healthy Volunteers
Phase 2a Topline Clinical Results Evaluating Neurophysiological and Functional Measures in SPG302-treated
ALS Participants  Acamprosate in C9orf72 Hexanucleotide Repeat Expansion Amyotrophic Lateral Sclerosis
A Planned Phase 3, Randomized, Double-blind, Placebo-controlled Study to Evaluate the Efficacy and Safety of
Pridopidine in Participants with ALS
Pridopidine exerts neuroprotective effects through the activation of the Sigma-1 receptor (S1R) by modulating ER stress in iPSC-derived neural progenitor cells
Protocol for A Duke University Pilot Trial Investigating the Safety and Efficacy of Microbiota Transplant Therapy (MTT) in People Living with Amyotrophic Lateral Sclerosis
Impact of Intrathecal delivery of INS1202 AAV9-SOD1-shRNA on hallmarks of neurodegeneration in a murine disease model of ALS and a patient-derived in vitro model.
Neuropathological characterization of anti-sense oligonucleotide treated Amyotrophic Lateral Sclerosis
Clinical Development of LTX-001, a small-molecule GLS1 inhibitor for the treatment for ALS
Clinical Development of LTX-002, an ASO for the treatment for ALS
DAZALS: A Phase 2, Randomized Controlled Trial of Dazucorilant, a Selective Glucocorticoid Receptor Modulator, in Amyotrophic Lateral Sclerosis
PARAGON: A Phase 3, Multinational, Randomized, Double Blind, Placebo Controlled, Parallel Group Trial with an Open Label Extension Evaluating PrimeC in Amyotrophic Lateral Sclerosis
Patient-Centered Drug Development: Addressing Liquid Formulations and Enteral Administration Considerations in PRO-101
The CALM Study: Controlling ALS Motor Neuron Excitability Through Multi-Site Direct Current Stimulation.
ANQUR, the First-in-Human Phase 1 study of QRL-201 in ALS Advances to Dose-Range Finding using a Novel Population Pharmacokinetic Analysis
QRL-101 - PHASE 1 STUDIES EVALUATING SAFETY AND PHARMACODYNAMICS OF A KCNQ2/3 MODULATOR IN HEALTHY VOLUNTEERS & NEXT STEPS FOR DEVELOPMENT IN ALS
NADALS Basket Trial: Drug Repurposing with baricitinib, an FDA-approved JAK inhibitor, in ALS patients
RESTORE-ALS: A Ph3, Randomized, DB, Pb-Controlled Trial in Early Symptomatic Participants on Stable Background Therapy to Reduce Mortality and Clinical Worsening Morbidity Events in ALS
Cross-Regimen Analysis of CNM-Au8® 30 mg Demonstrated a Significant Survival Benefit Over Long-Term
Follow-Up Compared to Regimen A in the HEALEY ALS Platform Trial
Comprehensive Responder Analysis with MN-166 in ALS trials
ROAR-DIGAP: A Widely Inclusive, Largely Virtual Pilot Trial Utilizing DIGAP (Deep Integrated Genomics Analysis Platform) To Personalize Treatments
ACT for ALS EAPs by the Numbers
Development of LTX-002, a novel ASO for the treatment of ALS
Examining IGFBP7 as a Potential Therapeutic Target in People with ALS
Advanced base and prime editing strategies to correct common ALS-causing SOD1 mutations