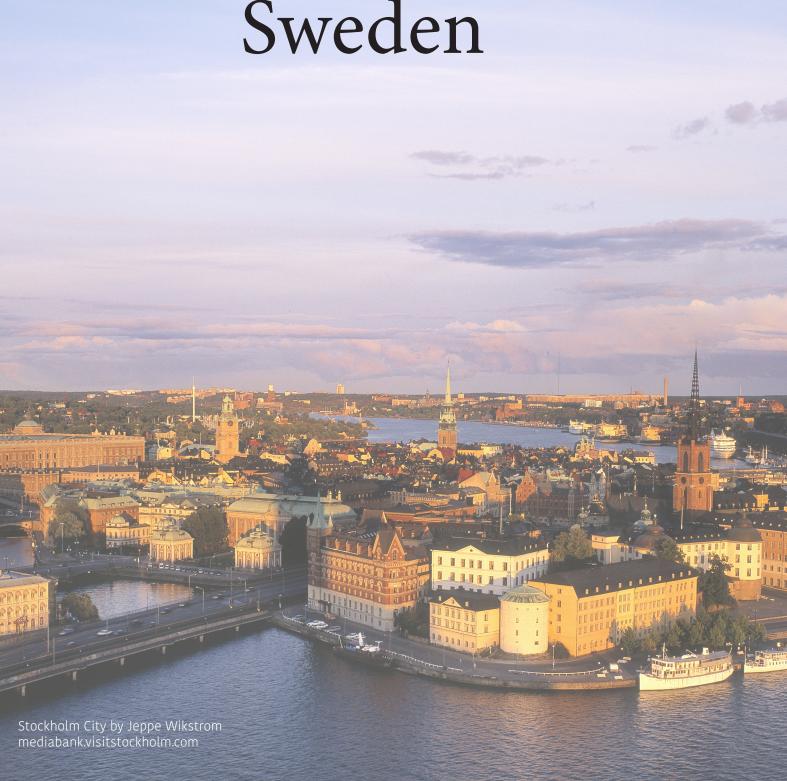
June 17-20, 2024 Scientific Programme

ENCALS meeting 2024

Stockholm, Sweden



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Welcome to Stockholm

Dear attendees of ENCALS,

I'm so very pleased to welcome you all to Stockholm this year for the ENCALS meeting 2024. It is an honor to organize this international meeting in Sweden. It has been more than a year since we started to organize this meeting, and I'm excited and thrilled to welcome you all. We are very happy for the nice program and thankful for the great speakers and look forward to listen to the latest scientific results in ALS research together with you!

The ENCALS meeting is a well visited international meeting aimed for young researchers to present their results. It is the mix of young and established researchers together with ALS-active companies, that makes the ENCALS meeting so unique. It is the perfect atmosphere for engaging stimulating discussions, creating collaborations and exchange knowledge.

It is our honor to welcome you at the Aula Medica, a beautifully designed building at the premises of Karolinska Institute. Designed by Wingårdh Arkitektkontor, this iconic structure was built to serve as a state-of-the-art lecture hall and event space for the university. The building's striking architecture features a modern glass facade that reflects the surrounding landscape, while its interior boasts cutting-edge technology and flexible seating arrangements to accommodate a variety of events and lectures. With its innovative design and functionality, the Aula Medica building has become a focal point of the Karolinska Institutet campus, embodying the institution's commitment to excellence in medical education and research. The actual room in which all presentations will take place, is a large amphitheater with a unique building structure; it is a pillar free hall with room for 1000 people. The auditorium is named after Erling Persson, founder of H&M, since the families generous donation in 2008 ensured the building.

During the conference we will stay at the Karolinska Institute, and enjoy lunch in the surroundings, and I am also thrilled to present a Swedish icon during the traditional Gala Dinner, namely the Vasa Museum. In this unique location the warship Vasa, an ancient ship located at the bottom of the ocean for 333 years until being rediscovered and salvaged, is now safely stored at the Vasa Museum, for everyone to see and experience. We promise a memorable experience!

My wish is for all of you to experience Swedish culture and research during the ENCALS conference, to persuade you that Sweden can do so much more than winning the Eurovision Song Contest. As you may (not) know, candy holds a special place in Swedish culture as an important treat enjoyed by Swedish people of all ages. Known as "smagodis," it plays a significant role in various traditions and celebrations, and its important to tell you that Swedes have a deep appreciation for these sweet delights that bring joy and sweetness to everyday life and counteracts the darkness during the winter months. To elevate your experince further and to make you feel like a real Swede, we have placed candystands at several places at the Aula Medica – your true Swedish experience is just about to begin!

Lastly, I want to thank all the sponsors for their support and all the members of the organizing committee for their dedication. This meeting wouldn't have been possible without them!

I hope you will all enjoy yourself in Stockholm!



- Caroline Ingre Host and local organizer



Information for presenters

Poster details

- Pins and/or stickers will be provided
- You have to bring your poster with you (printed)
- All posters must be designed on A0 portrait size
- There are two different poster sessions, please ensure your poster is up during the right session.

Timing Presentations

- Plenary keynote speakers have 20 minutes + 5 minutes for questions
- Abstract presenters have 8 minutes + 2 minutes for questions
- Rapid fire presenters have 2 minutes + 1 minute for changing speaker. No questions. All Rapid fire presenters have a poster as well.

Technical presentation details presenters

- There is a speaker room available behind the stage.
- You must upload your presentation before the conference. The link is sent to you via email.
- Please design your PowerPoint presentation in format 16:9
- If you want to show a video, make sure to upload this video seperately from your presentation





General information

Venue

Aula Medica at Karolinska Insitutet Nobels väg 6, 171 65 Stockholm

Directions and accessibility can be found on the Karolinska Institutet website.

Contact:

Program, abstracts and general ENCALS: Danique van der Gaauw - ENCALS office

manager - info@encals.eu

Registrations, sponsorship and local information:

Matilda Jansson and Alexander Masalin -ENCALS2024@akademikonferens.se

Registrations

Deadline for registrations is May 31, 2024 (or earlier if we reach capacity). See our website for the registration link and registration categories.

Please note that on-site registration will not be possible.

Registration includes:

- Participation at all ENCALS lectures and poster sessions
- Lunch on Wednesday, Tuesday and Friday
- Coffee/tea and something savoury and/or sweet during the breaks
- ENCALS gala dinner sponsored by ENCALS
- Access to the ENCALS meeting app with all the abstracts

ENCALS meeting app

Scan the QR code below to download. Enter this password when prompted: encals2024





App Store

Google Play

Main meeting Accessibility

The Aula Medica is accessible for people in a wheelchair. Please notify the local organizers via ENCALS2024@akademikonferens.se before the meeting - to ensure we have enough space for people in a wheelchair in the main hall.

Dietary requirements

If you have indicated that you have special dietary requirements, please make yourself known to a member of staff.

General items

The registration desk will be staffed throughout the main meeting.

There will be a cloakroom on the second floor of Aula Medica. Please bring small bags to the conference (not bigger than A4 size). You can leave larger items at the cloakroom.

The dress code for the conference is smart. casual, as is usual for ENCALS.

Gala dinner

The Gala dinner is held at the Vasa Museum (Galärvarvsvägen 14, Stockholm) on June 18 at 19:45 hrs. Here we will also take the group picture.

When you pick up your badge at the registration area, you will be given a ticket for the Gala dinner (if you added this at your registration). Please bring the ticket with you.

The temperature at the Vasa Museum is always 18 degrees to preserve the ancient ship. So don't forget to bring layers of clothing with you.

Committee members



Caroline Ingre, neurologist and head of ALS Center at Karolinska Institutet *Host and local organizer*



Juliette Foucher, PhD Student, Clinical Neuroscience Department, Karolinska Institutet Clinical research coordinator, Karolinska University Hospital Local organizer



Danique van der Gaauw ENCALS office manager

Team Academic Conferences

- Matilda Jansson
- Alexander Masalin

Programme committee

Orla Hardiman (IR) - chair Leonard van den Berg (NL) Ammar Al-Chalabi (UK) Monica Povedano (ES) Sharon Abrahams (SC) Jochen Weisenhaupt (GE) Caroline Ingre (SE) Ludo van den Bosch (BE) Adriano Chio (IT)

Award Committee

Ammar Al-Chalabi (UK) - chair
Ludo van den Bosch (BE)
Luc Dupuis (FR)
Magdalena Kuzma (PO)
Caroline Ingre (SE)
Dorothee Lule (GE)
Leonard van den Berg (NL) chair
Orla Hardiman (IR) - co-chair
Adriano Chio (IT) - treasurer
Philip van Damme (BE)
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Programme at a glance

	Agenda	Moderators	
Monday 17 June			
09:00-11:45	Registration		
11:45-12:45	Lunch		
12:45-13:15	Welcoming words - Caroline Ingre and Leonard van den Berg		
13:15-14:30	Session 1 - Population and disease registries and Epidemiology Invited Speaker: Fang Fang	- Adriano Chio and Fang Fang	
14:30-15.00	Break		
15:00-16:15	Session 2 - Clinical Invited Speaker: Julian Grosskreutz and Philip Van Damme	Caroline Ingre and Thomas Meyer	
16:15-16:45	Break		
16:45-17:30	Rapid Fire presentations A - Clinical	- Magdalena Kuzma	
17:30-18:30	Poster Session A		
Tuesday 18 June			
08:30-9:45	Session 3 - Pre-symptomatic changes and Imaging Invited Speaker: Joke de Vocht	Dorothee Lule and Sharon Abrahams	
09:45-10:15	Break		
10:15-11:15	Session 4 - Genetics Invited Speaker: Peter Andersen	- Jan Veldink and Philippe Corcia	
11:45-12:30	DEBATE —	Leonard van den Berg	
	Topic: ALS future: Targeted VS Untargeted/Cocktail treatments? Angela Genge vs Pamela Shaw		
14:00-15:15	Session 5 - Clinical trials and biomarkers ————————————————————————————————————	- Martin Turner and Orla Hardiman	
15:15-15:45	Break		
15:45-17:00	Platform presentation on trials: Amylyx (Phoenix), Ferrer (ADORE) ————————————————————————————————————	Orla Hardiman and Ammar Al-Chalabi	
17:00-17:45	Panel Discussion - about the New Std of Care Panel = Leonard van den Berg, Jeremy Shefner, Angela Genge, Pamela Shaw	Orla Hardiman and Ammar Al-Chalabi	
17:45-18:45	Poster Session B		
19:45-24:00	Gala dinner		
Wednesday 19 June			
09:00-10:15	Session 6 - Biomarkers - Basic and translational Invited Speaker: Leonard Petrucelli	Philipe Van Damme and Sebastian Levandowski	
10:15-10:45	Rapid Fire presentations B - Basic —	- Monica Povedano	
10:45-11:15	Break		
11:15-11:30	EU ALS Coalition	- Andrea Calvo	
11:30-11.50	Industry Update, John Ravits—	- Andrea Calvo	
11:50-12:00	Himalaya Trial, Nazem Atassi	- Andrea Calvo	
12:00-12:20	Borje Salming Award for best Rapid Fire Presentation, Ulf Hedin	Caroline Ingre	
12:00-13:30	Lunch and posters	ropear	
13:30-14:45	Session 7 - Cellular, Molecular Biology, Dx and animal model Invited Speaker: Don Cleaveland	- Eva Hedlund and Jeroen Pasterkamp Network to - Ammar Al-Chalabi and Caroline Ingre	
14:45-15:15	Young Investigator and Poster Award —	Ammar Al-Chalabi and Caroline Ingre	
15:15-15:30	Wrap-up and announce of the next year	Leonard van den Berg, Caroline Ingretand Adriano Chio	

Monday 17th of June

09:00 - 11:45 Registration 11:45 - 12:45 Lunch

12:45-13:15 **Welcoming words**

Leonard van den Berg and Caroline Ingre

13:15-14:30 Session 1 - Population and disease registries and Epidemiology

Moderators: Adriano Chio and Fang Fang

Invited speaker: Fang Fang

- 1. Survival of ALS patients has increased over time: results from a long-standing register. *Rosario Bvasta*
- 2. Increased incidence of motor neuron disease in Sweden: a population-based study during 2002-2021 Sofia Imrell
- 3. Epidemiology of Amyotrophic Lateral Sclerosis in Catalonia (Spain): 2015-2020 Sergio Vidal Notari
- 4. Amyotrophic lateral sclerosis caused by the C9orf72 expansion in Norway prevalence, ancestry, clinical and demographic variables

 Helle Hoyer
- 5. A population-based disease mapping of ALS incidence in the Republic of Ireland from 1995 to 2022 Eanna Mac Domhnaill

14:30-15.00 **Break**

15:00-16:15 **Session 2 - Clinical**

Moderators: Caroline Ingre and Thomas Meyer

Invited speakers: Julian Grosskreutz and Philip van Damme

- 6. Single-cell transcriptomics reveal the presence of clonally expanding T cells in ALS ZhenZhen Chen
- 7. Glymphatic dysfunction occurs across clinical phenotypes of motor neuron disease Edoardo Gioele Spinelli
- 8. Brain metabolic features of FUS-ALS: a 2-[18F]FDG-PET study Antonio Canosa
- 9. Sex Differences in Amyotrophic Lateral Sclerosis Survival and Progression: A Multidimensional Analysis Maurizio Grassano
- 10. Neurofilament content of patient sensory skin axons reflects ALS progression Janina von der Gablentz
- 11. Understanding How Cognitive and Behavioural Impairments Affect the Mental Capacity to Make Treatment Decisions in ALS.

Milena Contreras



16:15-16:45 Break

16:45-17:30 Rapid Fire Presentations A - Clinical

Moderator: Magdalena Kuzma

I. FDG-PET clustering analysis in Amyotrophic Lateral Sclerosis. *Joke de Vocht*

II. Targeting the energy deficit in ALS - the LIPCAL-ALS II study Johannes Dorst

III. Rare variants in the genetic background modulate risk and phenotype in ALS Maurizio Grassano

IV. Cognitive Deficits in ALS patients with SOD1 mutations Ivar Winroth

V. Physical activity, fitness and long-term risk of amyotrophic lateral sclerosis - a prospective cohort study

Anders Myhre Vaage

VI. Exploring the Genetic Underpinnings of Cognition in ALS through Multi-Trait GWAS Analysis

Emrah Kacar

VII. Longitudinal cognitive assessment using the Cumulus home-based EEG platform in ALS and FTD.

Emmet Costello

VIII. Defining functional brain network changes in ALS at higher temporal resolution Alicia Northall

IX. Associations between resting-state electroencephalographic (EEG) measures and cognitive functions in ALS: a preliminary region-specific analysis

Serena Plaitano

X. Association study on HERV-K genomic insertions in Amyotrophic Lateral Sclerosis Simon Topp

XI. Is a brief apathy assessment useful in motor neuron disease clinics? Ratko Radakovic

XII. Investigating the potential of apathy as a predictor for ALS trial-participation. Juliette Foucher

XIII. Education mediates the association between motor and cognitive-behavioural features in non-demented ALS patients

Edoardo Nicolo Aiello

XIV. An update on the role of autoantibodies against neurofilaments in amyotrophic lateral sclerosis (ALS)

Ellie Sturmey

XV. BRAINTEASER Project: Enhancing Amyotrophic Lateral Sclerosis Care through Remote Monitoring and Artificial Intelligence Integration

Ines Alves

17:30-18:30 **Poster Session A**

08:30-9:45 Session 3 - Pre-symptomatic changes and Imaging

Moderators: Dorothee Lule and Sharon Abrahams

Invited speaker: Joke de Vocht

12. A comparison of frameworks for identifying cognitive and behavioural impairment in pre-symptomatic ALS

Caroline McHutchison

13. ECAS correlation with metabolic alterations on FDG-PET imaging in ALS patients Linn Oijerstedt

14. QSM-detected iron accumulation in the cerebellar gray matter selectively predicts executive dysfunction in non-demented ALS patients

Claudia Morelli

15. Cognitive endophenotypes and C9orf72 in familial ALS: a longitudinal study Colm Peelo

09:45-10:15 Break

10:15-11:15 **Session 4 - Genetics**

Moderators: Jan Veldink and Philippe Corcia

Invited speaker: Peter Andersen

16. Multiomic analysis to identify the genetic basis of amyotrophic lateral sclerosis Calum Harvey

17. Plasma extracellular vesicle Tau and TDP-43 as diagnostic biomarkers in FTD and ALS *Anja Schneider*

18. Using Irish Clan Genomics to Interrogate the Biological Overlap between Amyotrophic Lateral Sclerosis and Neuropsychiatric Disorders

Ciara O'Donoghue

19. Genome-wide screen for genetic modifiers in ALS progression *Ramona Zwamborn*

20. The shared ancestry between the C9orf72 hexanucleotide repeat expansion and intermediate-length alleles using haplotype sharing trees and HAPTK

Osma Rautila

11:15-11:45 Break

11:45-12:30 Debate: "ALS future: Targeted vs. Untargeted/Cocktail treatments?

Moderator: Leonard van den Berg

Invited speakers: Angela Genge and Pamela Shaw

\$\frac{4}{3}2:30-14:00 Lunch

4:00-15:15 **Session 5 - Clinical trials and biomarkers**

Moderators: *Martin Turner and Orla Hardiman* **Invited speaker:** *Christopher McDermott*

- 21. Identification of proteomic clusters in the CSF of sporadic ALS patients Laura Tzeplaeff
- 22. Combined rescue of STMN2 and UNC13A mis-splicing in ALS using a novel therapeutic approach

Puja Mehta

- 23. Serum neurofilament light chain in distinct phenotypes of amyotrophic lateral sclerosis a longitudinal multicenter study

 Thomas Meyer
- 24. Using ALS patient-derived astrocytes to identify patient stratification biomarkers in response to a promising multi-target drug

 Raquel Rua Martins
- 25. Skin innervation across ALS clinical stages: new biomarkers of disease progression and survival

 *Raffaele Dubbioso**
- 26. Longitudinal analysis of T cells responses in amyotrophic lateral sclerosis *Solmaz Yazdani*

15:15-15:45 Break

15:45-17:00 Platform presentation on trials: Phoenix, ADORE and Humanitas Research Hospital (TUDCA trial)

Moderators: Ammar Al-Chalabi and Orla Hardiman Leonard van den Berg, Sabrina Paganoni and Alberto Albanese

17:00-17:45 Panel Discussion - About the New Standard of Care

Moderators: Ammar Al-Chalabi and Orla Hardiman Leonard van den Berg, Jeremy Shefner, Angela Genge, Pamela Shaw

17:45-18:45 **Poster Session B**

19:45-24:00 Gala Dinner

09:00-10:15 Session 6 - Biomarkers; Basic and translational

Moderators: Philipe van Damme and Sebastian Levandowski Invited speaker: Leonard Petrucelli

- 27. Stress granules and oxidation drive TDP-43 demixing in the cytoplasm *Jik Nijssen*
- 28. Differential pathways of astrocyte toxicity in sporadic ALS Katie Bowden
- 29. Investigating the metabolic crosstalk between senescent lymphocytes and microglia from patients with ALS

 Victoria Tsang
- 30. Toxic gain-of-function mechanisms, but not C9orf72 haploinsufficiency impairs the autophagy pathway in C9orf72 ALS/FTD iPSC-derived motor neurons.

 Jimmy Beckers



31. Targeting EGLN2/PHD1 protects motor neurons and normalizes the astrocytic interferon response.

Christine Germeys

32. Exploring Metabolic Pathways in ALS: TDP-43, Mitochondria, and Ferroptosis Interplay Miriam Ceron Codorniu

10:15-10:45 Rapid Fire presentations B - Basic

Moderator: Monica Povedano

XVI. Tbk1 mutant zebrafish show increased programmed cell death and dysregulation of critical pathways involved in Amyotrophic Lateral Sclerosis (ALS) Quentin Raas

XVII. Characterising activity-related phenotypes in C90RF72 iPSC MNs using optogenetics Jiali Gao

XVIII. Impact of trauma on presymptomatic C9orf72 carriers and symptomatic patients using hiP-SC-derived organoids as a double-hit model of neurodegeneration Karthik Baskar

XIX. NEK1 regulates ER-mitochondria contacts.

Natalie Pve

XX. Comprehensive DNA methylation analysis shows no age acceleration in amyotrophic lateral sclerosis.

Polina Merbaum

XXI. Dysregulation of muscle cholesterol homeostasis in amyotrophic lateral sclerosis Flore Chequillaume

XXII. Disruption of the Angiopoietin-like protein system associates lipid homeostasis with hypothalamic dysfunction in ALS

Sruthi Sankari Krishnamurthy

XXIII. Altered Expression of Membrane Proteins in C9orf72 Mutation-Associated ALS and FTD Ursa Cercek

XXIV. Endothelial TDP-43 controls sprouting angiogenesis and vascular barrier integrity, and its deletion triggers neuroinflammation

Eloi Montanez

XXV. Activation of polo-like kinase 1 expression in spinal motor neurons underlies the increased vulnerability of spinal motor neurons in FUS-ALS Andreas Hermann

10:45-11:15 Break

EU ALS Coalition

Moderator: Andrea Calvo Speaker: Julian Grosskreutz



11:30-11:50 Industry Update

Moderator: Andrea Calvo Speaker: John Ravits

11:50-12:10 Himalaya trial

Moderator: Andrea Calvo Speaker: Nazem Atassi

12:10-12:20 Borje Salming Award for best Rapid Fire Presentation

Moderator: Caroline Ingre Speaker: Ulf Hedin

12:20-13:30 Lunch and posters

13:30-14:45 Session 7 - Cellular, Molecular Biology and Animal Model

Moderators: Eva Hedlund and Jeroen Pasterkamp

Invited speaker: Don Cleveland

33. (GR)400 and (PR)400 knock-in mice show a conserved neuroprotective role of an extracellular matrix signature in C9ALS/FTD

Carmelo Milioto

34. C-myc dysregulation contributes to glia-to-neuron miscommunication in Amyotrophic Lateral Sclerosis and Frontotemporal dementia

Manuela Basso

35. A TBK1 variant causes autophagolysosomal and motoneuron pathology without neuroinflammation in mice

David Brenner

- 36. Organellomics: AI-driven deep organellar phenotyping of human neurons *Eran Hornstein*
- 37. Modelling ALS caused by KIF5A mutations in patient-derived motor neurons Isabel Loss
- 38. The homeoprotein transcription factor ENGRAILED-1 allows for spinal α -Motoneurons protection and repair

Alain Prochiantz

14:45-15:15 Young Investigator and Poster Award

Ammar Al-Chalabi and Caroline Ingre

15:15-15:30 Wrap-up and announce ENCALS 2025

Leonard van den Berg, Caroline Ingre and Adriano Chio



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09.00 - 09.05 Introduction

Chairman: Prof. N. Ticozzi, Italy

09.05 - 09.15 Assessing daily ALS treatment:

are there any gaps? Prof. M. Povedano, Spain

09.15 - 09.25 Clinical aspects:

understanding current patient needs

Prof. J. Grosskreutz, Germany

09.25 - 09.35 Empowering people with ALS:

the impact of improved treatment explanations

R. Marsden, United Kingdom

09.35 - 10.00 Open Discussion

THE SYMPOSIUM WILL FOCUS ON THE TREATMENT OF ALS AND ITS VARIOUS ASPECTS, WITH SPECIAL EMPHASIS ON THE UNIQUE NEEDS OF PATIENTS AND THEIR ACTIVE PARTICIPATION IN UNDERSTANDING TREATMENT AND TAKING CARE OF THEMSELVES.

The speakers will present thoughts and data to

 deepening everyday ALS treatment, to assess whether any gaps are not promoting a proper management of patients and the specific needs.

understanding of patients' clinical needs by examining the challenges that people with ALS face day by day, to provide insights
for potentially more personalized and effective care strategies.

celebrating patient empowerment in ALS treatment by exploring how improved explanations of treatment can provide patients with the knowledge they need to participate in their care actively.

Zambon

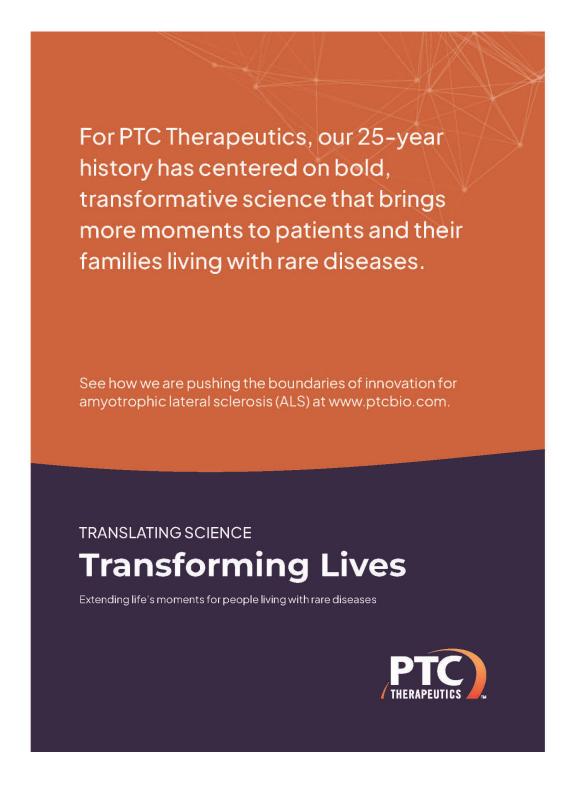
















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