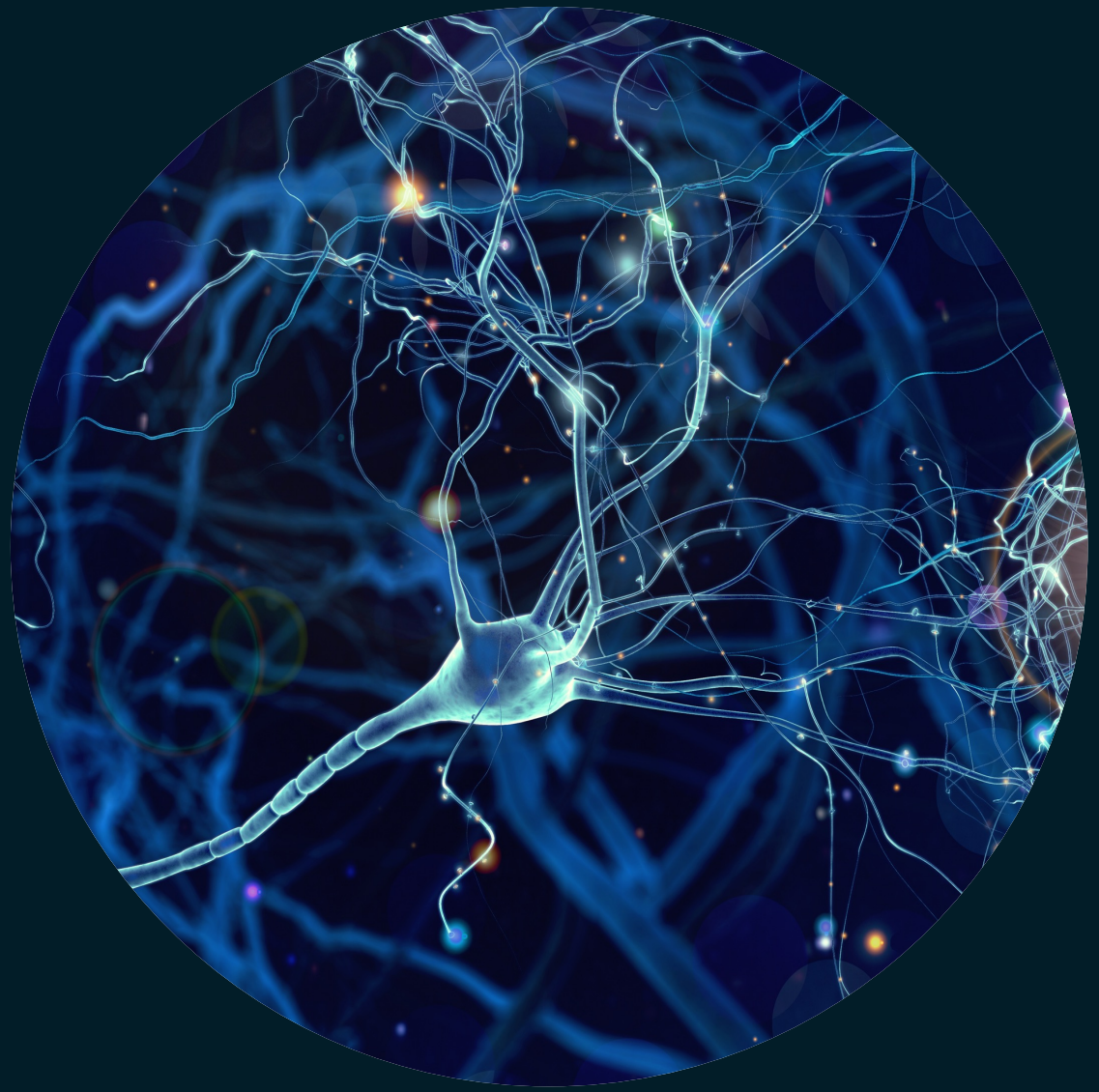


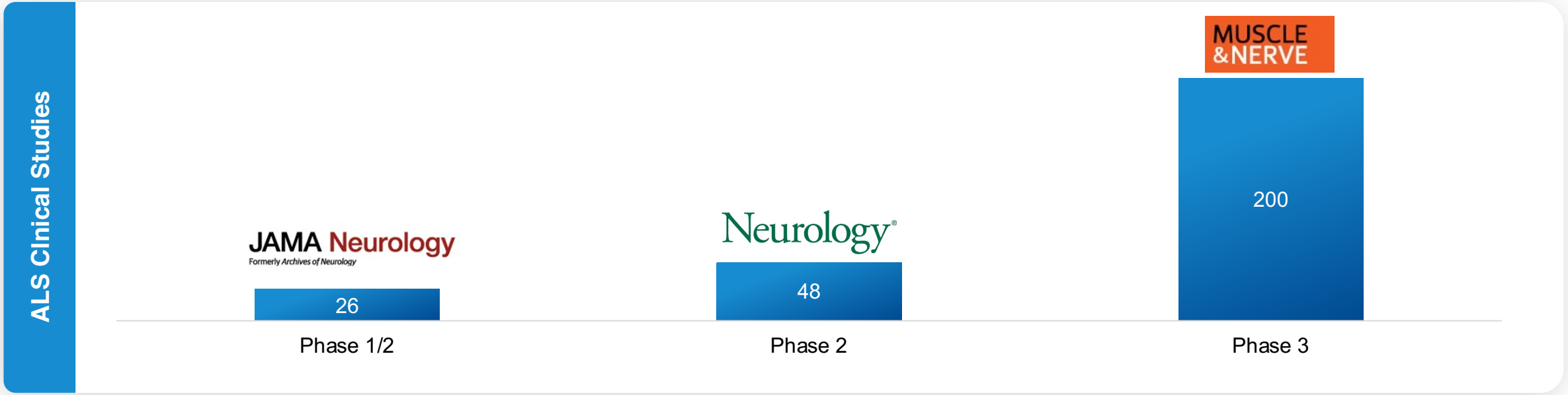
Brainstorm Cell Therapeutics

Ralph Kern MD MHSc

12th Annual California ALS Research Summit

January 27, 2021

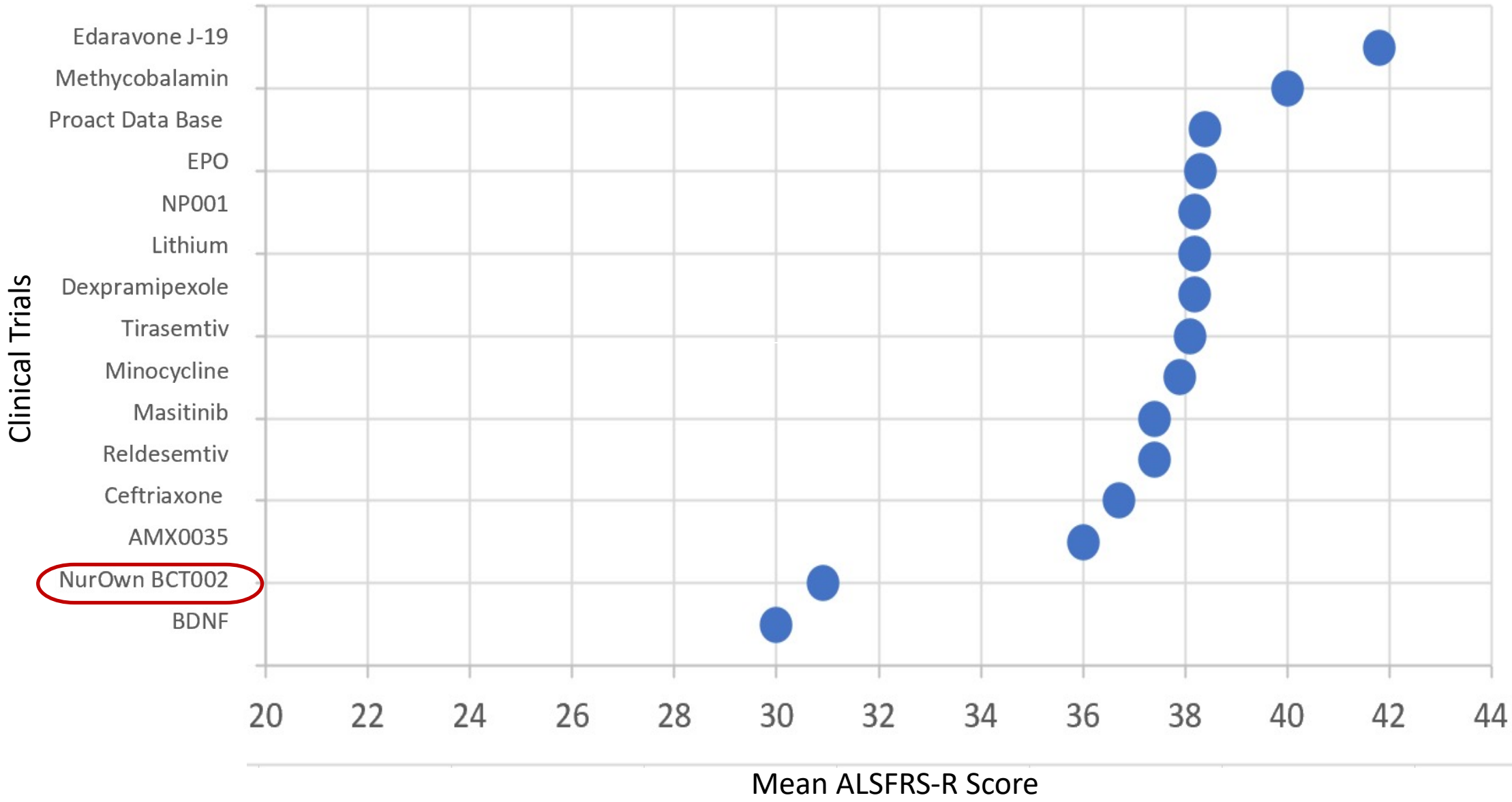
NurOwn® in ALS: 10+ Years Clinical Development



2007	2010	2014	2017	2019	2020
NurOwn Preclinical Development	ALS Phase 1/2a Open label	ALS US Phase 2 Randomized trial	ALS US Phase 3 Randomized trial	ALS US Phase 3 Fully Enrolled	ALS US Phase 3 Topline Data Readout

BCT-002 had a unique range of ALS Disease severity (very late)

Mean Baseline ALSFRS-R Score in Phase 2 & 3 Clinical Trials

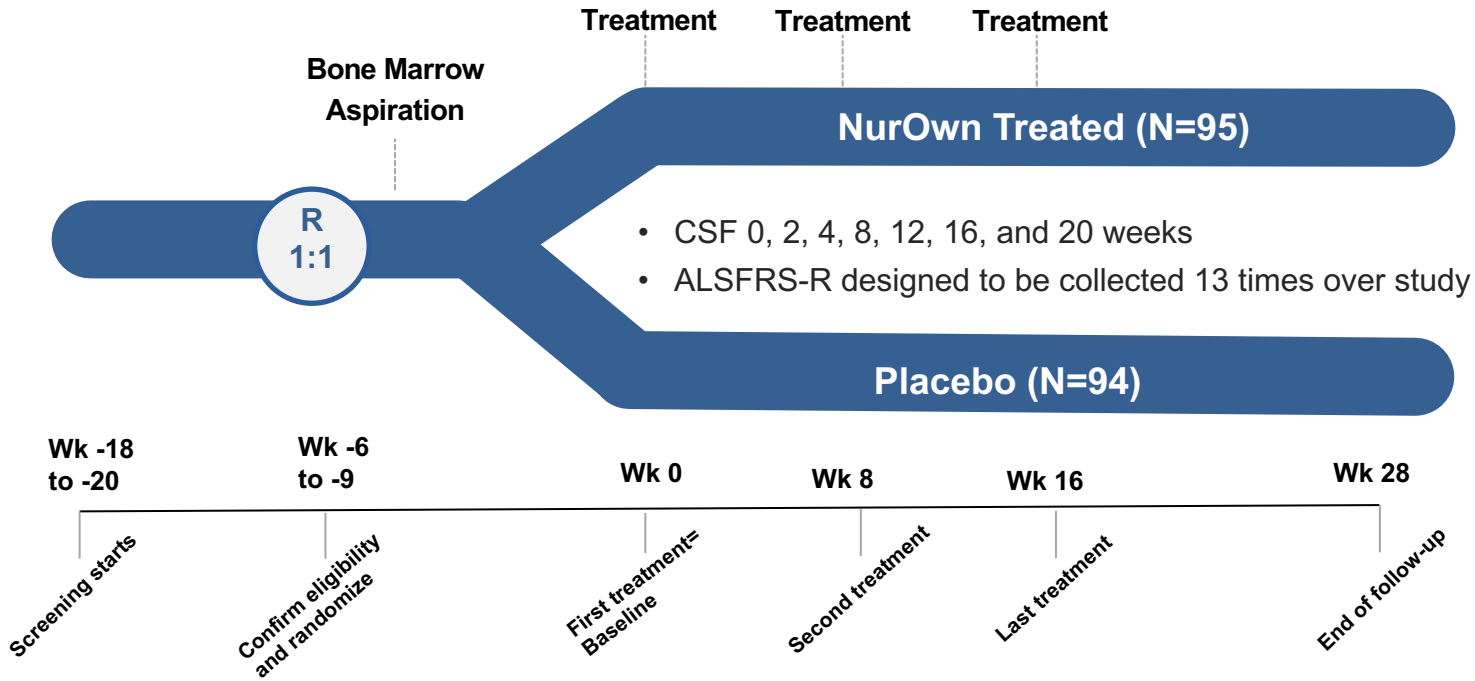


Phase 3 Trial of NurOwn® in ALS Patients : Protocol

Double-blind, Placebo-controlled, Randomized Trial
First Participant Screened: 28 August 2017. Database Lock: 30 October 2020

Designed to exclude slow progressors. Inclusion criteria specified:

- ALSFRS-R ≥ 25 at Screening Visit (Not at Baseline).
- Decline in ALSFRS-R total score of 3 or more points in the 12 weeks before randomization.



Primary Endpoint

A responder analysis of the change in rate of decline as assessed by ALSFRS-R

Secondary Endpoints

Safety

ALSFRS-R change from baseline

Combined Analysis of Function and Survival

Slow Vital Capacity

CSF/Blood biomarkers

ClinicalTrials.gov Identifier: NCT03280056

Abbreviations: ALSFRS-R=ALS Functional Rating Scale, revised; CSF=Cerebrospinal fluid

Baseline Disease Characteristics (mITT Population)

More NurOwn-treated participants had ALSFRS-R baseline scores <35

	NurOwn N=95	Placebo N=94	Total N=189
Males, n (%)	68 (71.6)	59 (62.8)	127 (67.2)
Pre-treatment slope, Mean (SD)	-1.7 (0.75)	-1.6 (0.82)	
Baseline ALSFRS-R, Mean (SD)	30.3 (6.5)	31.4 (6.1)	30.9 (6.3)
ALSFRS-R < 35, n (%)	69 (72.6)	62 (66.0)	131 (69.3)
ALSFRS-R >=35, n (%)	26 (27.4)	32 (34.0)	58 (30.7)
Months since diagnosis, months, Mean (SD)	6.8 (4.35)	6.1 (4.80)	6.4 (4.58)
Months since symptom onset, months, Mean (SD)	19.6 (5.17)	19.1 (4.90)	19.4 (5.03)
Use of Riluzole, n (%)	65 (68.4)	56 (59.6)	121 (64.0)
El Escorial Possible, n (%)	6 (6.3)	6 (6.4)	12 (6.3)
Lab-supported Probable, n (%)	15 (15.8)	23 (24.5)	38 (20.1)
Probable, n (%)	24 (25.3)	31 (33.0)	55 (29.1)
Definite, n (%)	50 (52.6)	34 (36.2)	84 (44.4)
Limb and Bulbar, n (%)	15 (15.8)	21 (22.3)	36 (19.0)

Patient Safety- Overall Treatment Emergent AEs

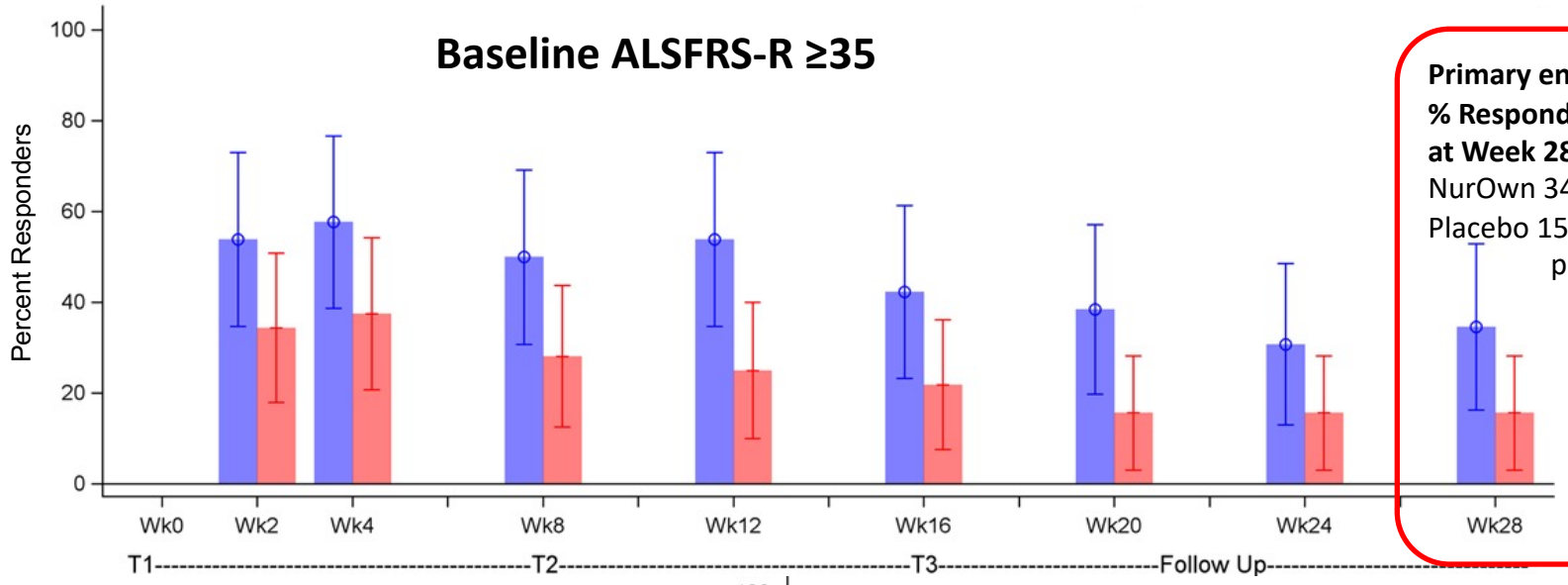
Safety Population

	NurOwn (N=95) Participants (%)	Placebo (N=94) Participants (%)
TEAEs	94 (98.9)	92 (97.9)
TEAEs Related to Study Drug(1)	76 (80.0)	66 (70.2)
Serious TEAEs	23 (24.2)	17 (18.1)
Serious Related TEAEs	1 (1.1)	1 (1.1)

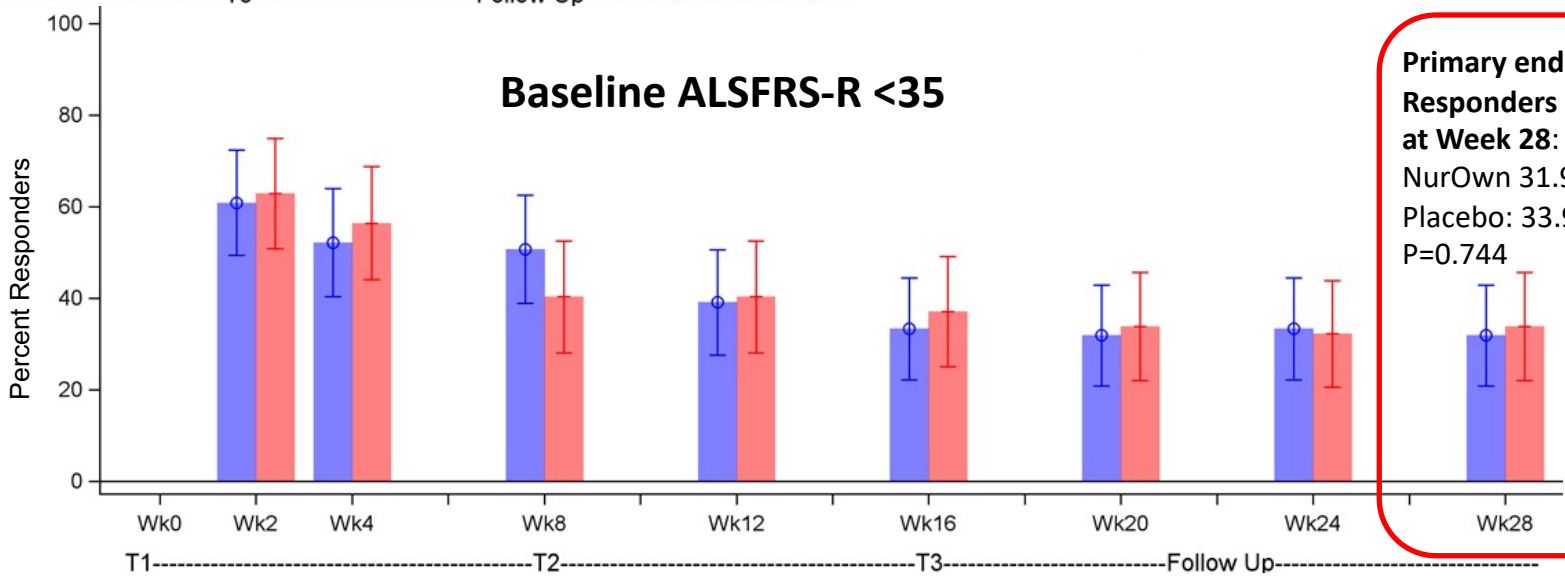
(1) Treatment related TEAEs ar TEAEs considered to have probable, possible, or definite relationship to study drug

Responder Analysis by Baseline ALSFRS-R <35 or ≥35

Primary endpoint re-analyzed by baseline ALSFRS-R score, pre-specified subgroup



Primary endpoint:
% Responders
at Week 28:
NurOwn 34.6% (9/26)
Placebo 15.6% (5/32)
p=0.288

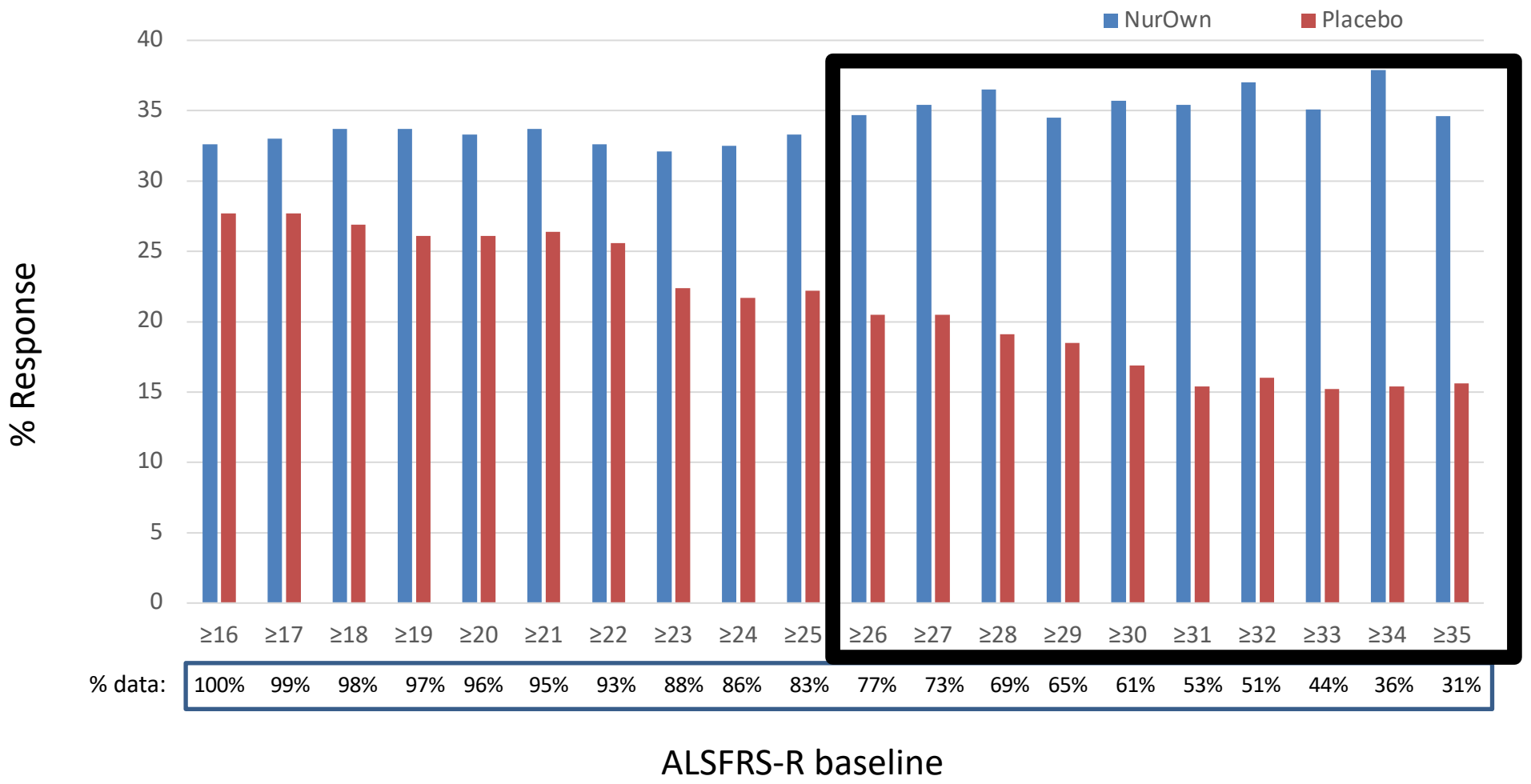


Primary endpoint:
Responders
at Week 28:
NurOwn 31.9% (22/69)
Placebo: 33.9% (21/62)
P=0.744

Treatment NurOwn® Placebo

Primary Endpoint as pre-specified

Baseline ALSFRS-R value by cut-points and their impact on the Primary Analysis

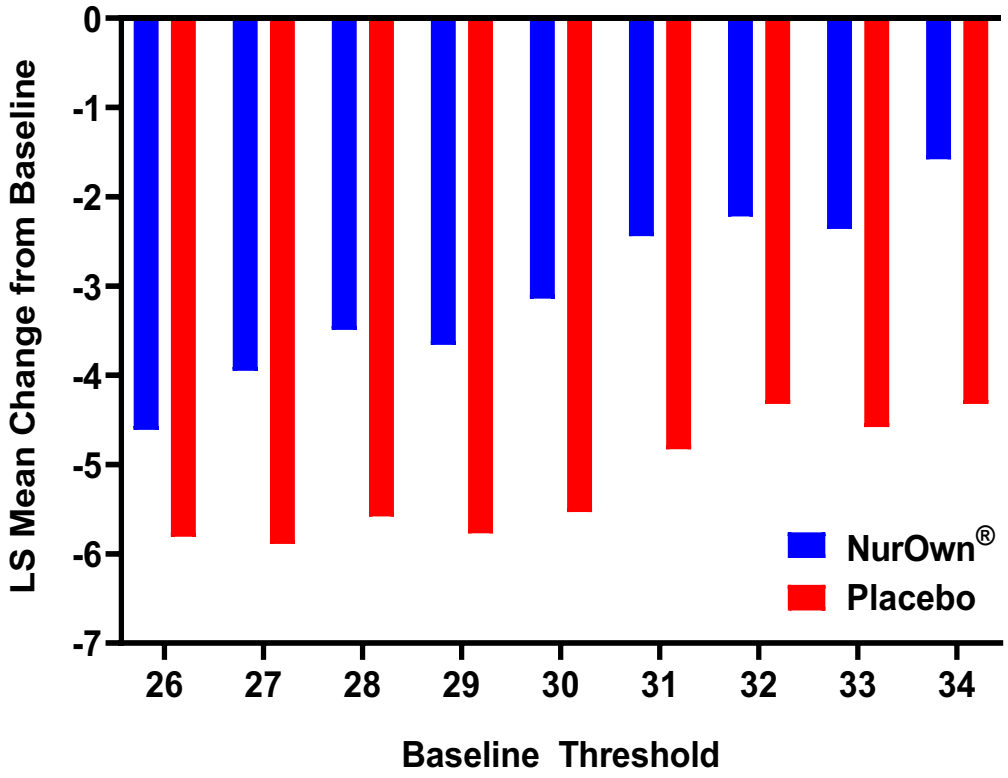


ALS Phase 3 Secondary Endpoint by Baseline ALSFRS-R > 25

Consistent preservation of function across baseline thresholds

Participants included, by baseline:	n (%) of total patients:	ALSFRS-R MMRM Change from baseline to Week 28			
		NurOwn LS mean (SE)	Placebo LS mean (SE)	Delta	p-value
≥34	57 (30)	-1.58 (1.13)	-4.32 (0.96)	2.74	0.057
≥33	69 (37)	-2.36 (1.02)	-4.58 (0.91)	2.23	0.092
≥32	78 (41)	-2.22 (0.0)	-4.32 (0.87)	2.10	0.081
≥31	80 (42)	-2.44 (0.89)	-4.83 (0.86)	2.39	0.045
≥30	92 (49)	-3.14 (0.82)	-5.53 (0.81)	2.39	0.032
≥29	97 (51)	-3.66 (0.82)	-5.77 (0.78)	2.11	0.054
≥28	105 (56)	-3.49 (0.78)	-5.58 (0.75)	2.09	0.048
≥27	110 (58)	-3.95 (0.76)	-5.89 (0.72)	1.94	0.060
≥26 (or >25)	116 (61)	-4.61 (0.75)	-5.81 (0.75)	1.20	0.247

Legend: ALSFRS-R=ALS Functional Rating Scale Revised; LS=Least Squares; MMRM=Mixed Effect Model Repeated Measures.



NurOwn MOA: Lessons learned from Phase 2, Replicated in Phase 3

Neuroinflammation, Neurodegeneration, and Neuroprotection Biomarkers

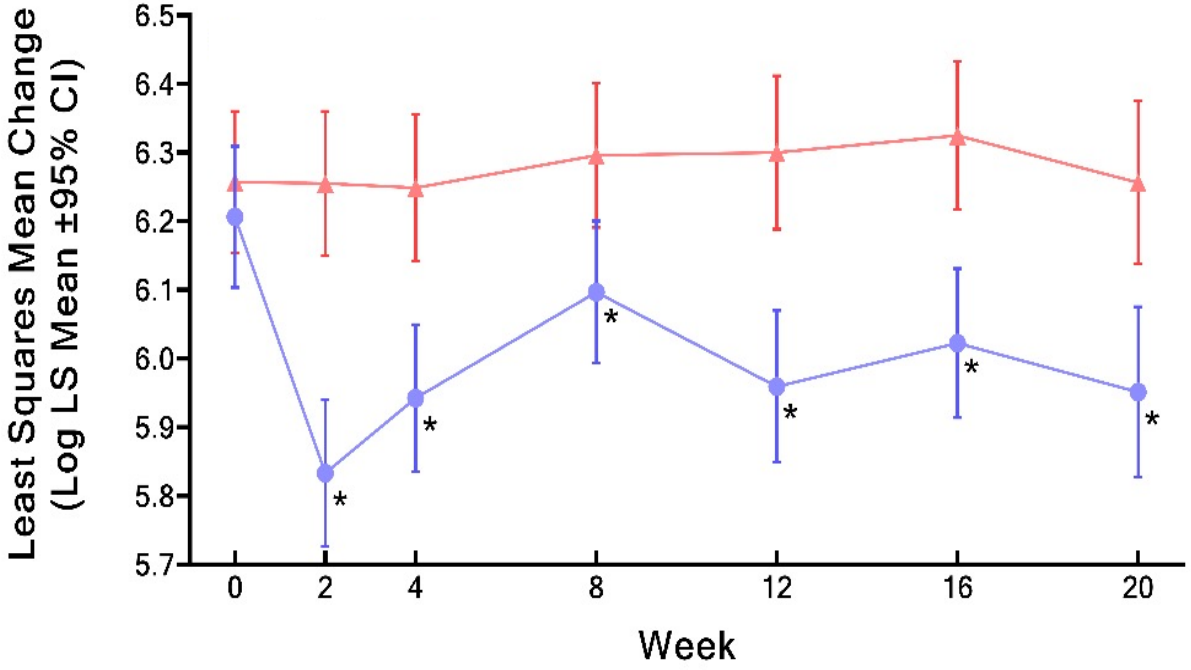
Underlying pathologies of ALS, pMS, and AD	NurOwn MSC-NTF MOAs
Neuroinflammation and Microglial Activation	**Reduced Neuroinflammation** Reduces CSF MCP-1, SDF-1, S100b, NMAT-1, TREM2
Neuronal Degeneration	**Reduced Neurodegeneration, Cell death** Reduces CSF NfL, pNfH, DR6, Tweak, UCH-L1
Loss of Neurotrophic Support	**Enhanced delivery of NTFs** Increases CSF VEGF, BDNF, Clusterin, Follistatin

ALS: Amyotrophic lateral sclerosis; pMS: Progressive multiple sclerosis; AD: Alzheimer's Disease; MOAs: Mechanisms of action

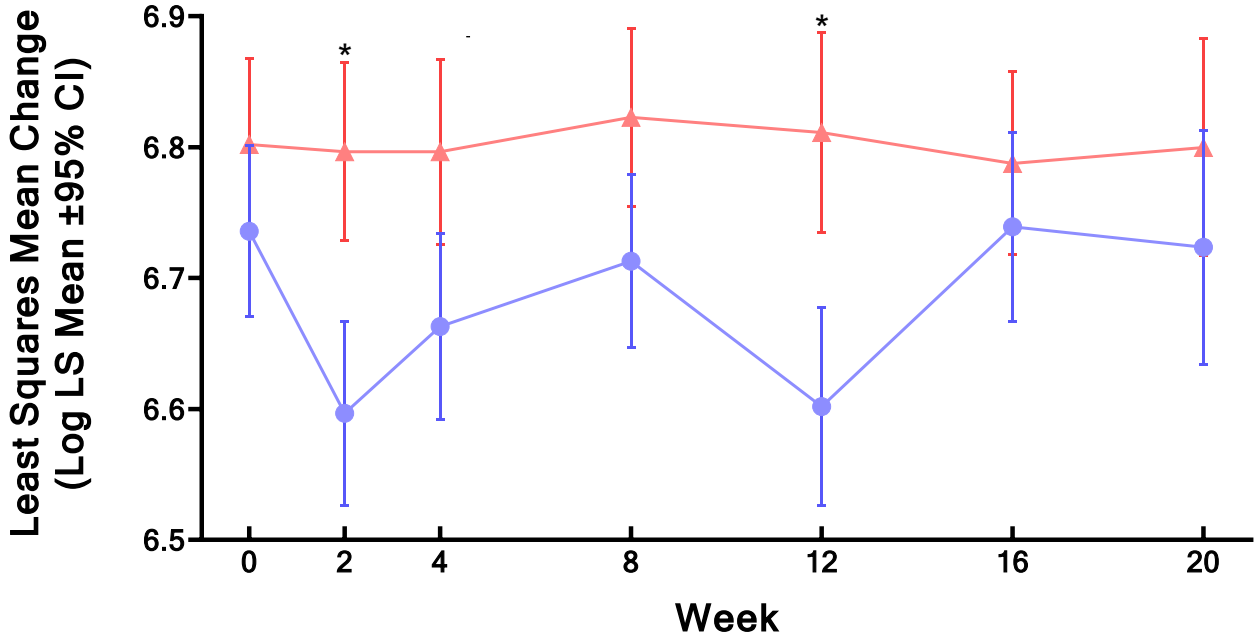
Neuroinflammatory Biomarker Concentration in CSF Over Time, LSMean (95%CI)

NurOwn significantly lowers neuroinflammation biomarkers over time compared to placebo

MCP-1: Statistically significant reduction with NurOwn at each visit, and significant overall treatment effect



SDF-1a: Statistically significant reduction with NurOwn, significant overall treatment effect



NurOwn placebo

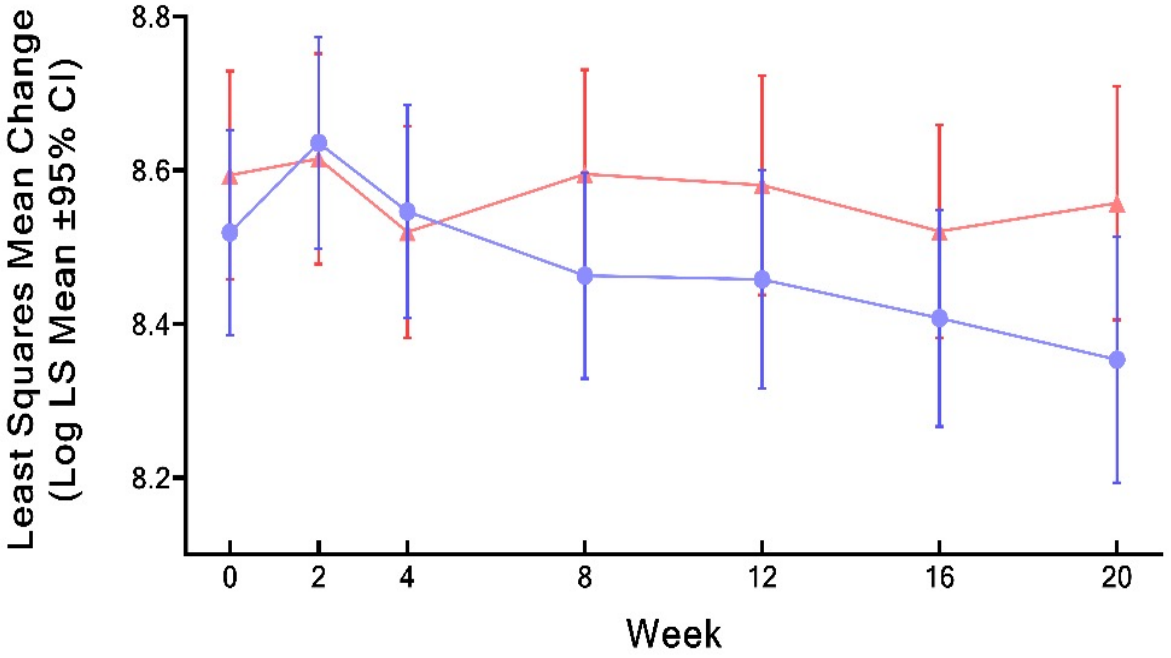
*p < 0.05

MCP-1 and SDF-1a:
Treatment effect p < .01
Visit effect p< .01

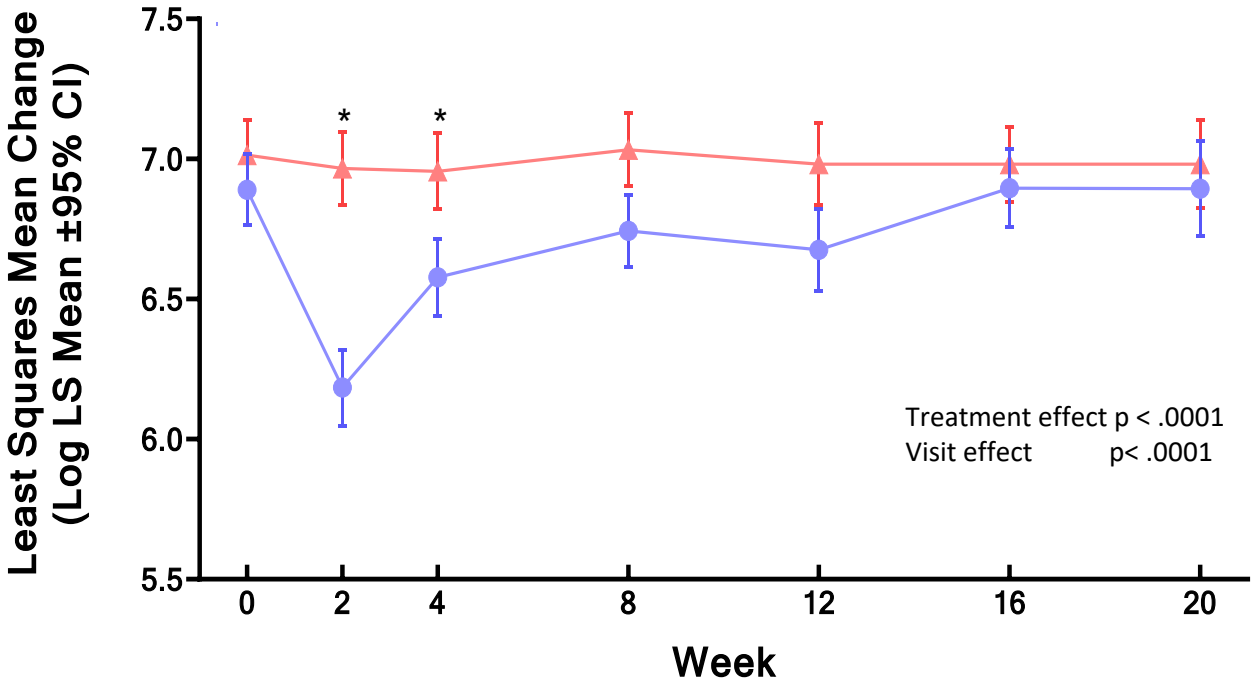
Neurodegenerative Biomarker Concentration in CSF Over Time, LSMean (95%CI)

NurOwn lowers neurodegenerative biomarkers over time compared to placebo

NfL: NurOwn values lowered 82% compared to Placebo at week 20



DR6: Statistically significant reduction with NurOwn, significant overall treatment effect



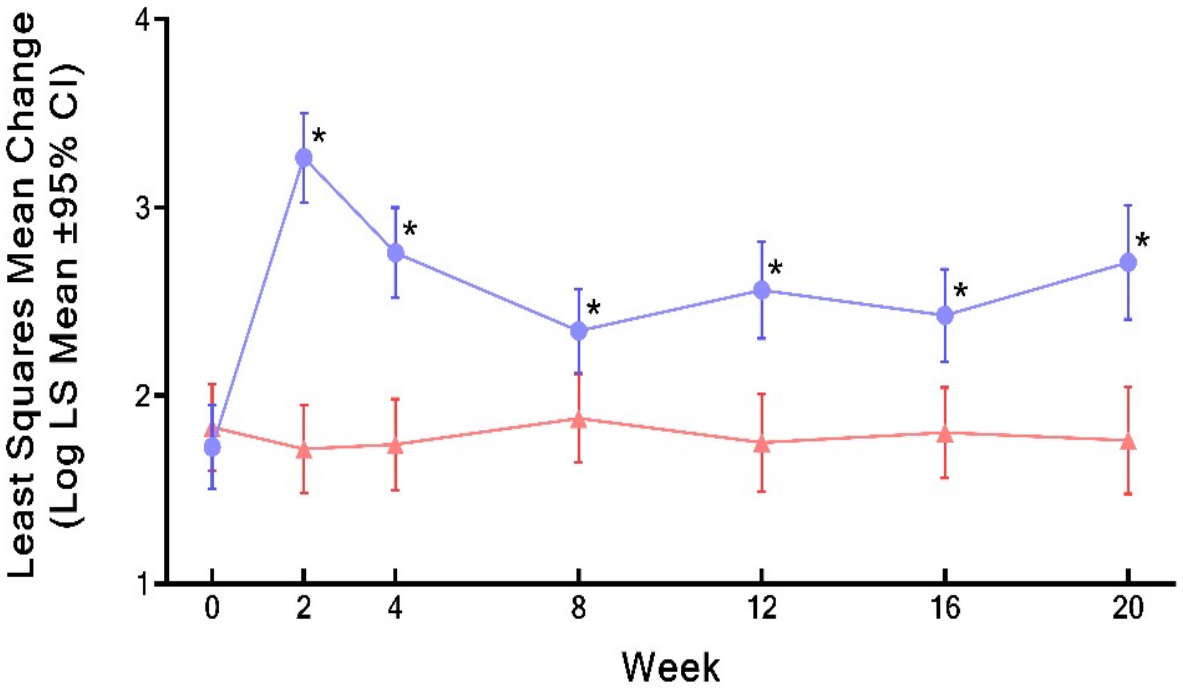
NurOwn placebo

*p < 0.05

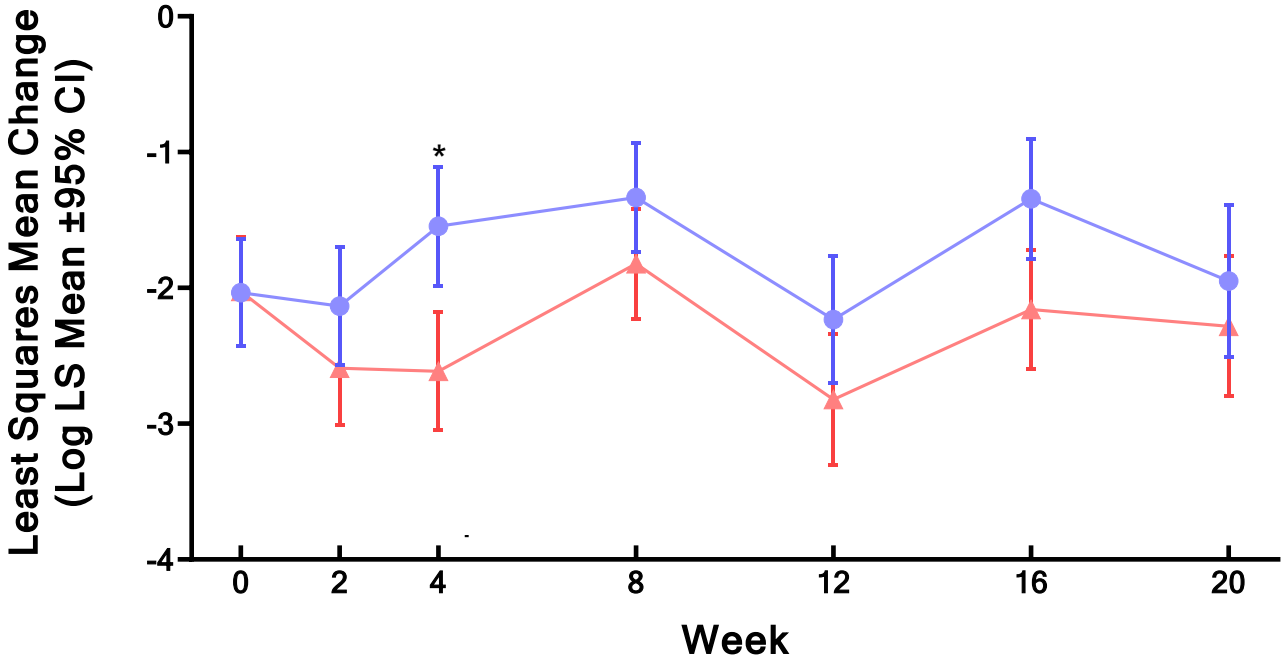
Neuroprotective Biomarker Concentration in CSF Over Time, LSMean (95%CI)

NurOwn significantly elevates Neuroprotection biomarkers over time compared to placebo

VEGF: Statistically significant increase with NurOwn at each visit, and significant overall treatment effect (2-fold increase)



BDNF: Statistically significant increase with NurOwn, with overall significant treatment effect



NurOwn placebo

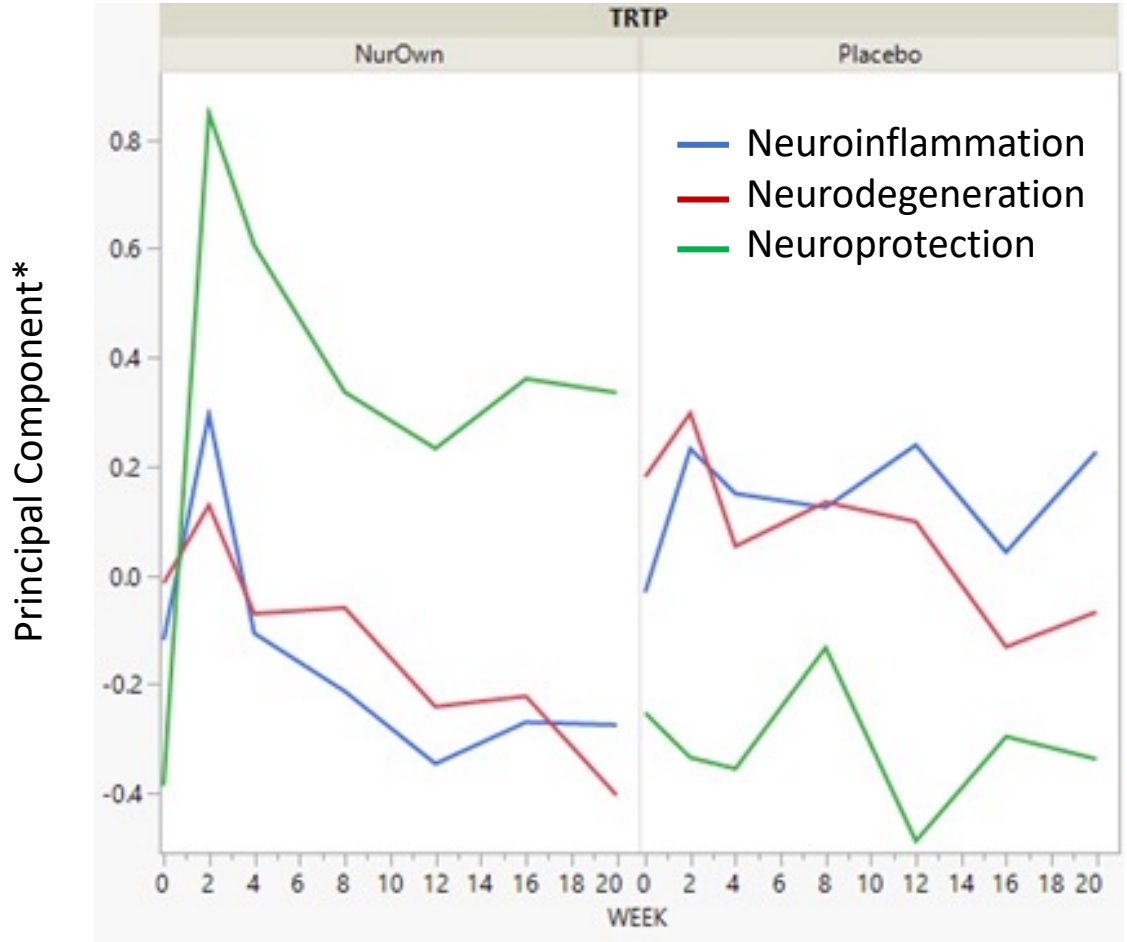
*p < 0.05 **VEGF and BDNF:**
Treatment effect p < .001
Visit effect p < .001

Statistical Analysis of Biomarker data through Principal Components

NurOwn decreases Neuroinflammation and Neurodegeneration, and increases Neuroprotection

Trend with individual biomarkers confirmed across biomarkers with PCA

- **Neuroinflammation decreased with NurOwn treatment over 20 weeks**
  - **Placebo Neuroinflammation levels remain high**
- **Neurodegeneration decreases with NurOwn**
  - **Placebo Neurodegeneration levels decrease across the study, remain elevated relative to NurOwn.**
- **Neuroprotection increased with NurOwn treatment and is maintained over 20 weeks**
  - **Placebo Neuroprotective levels remain low**



**Graph produced the first Principal component from each pathway*

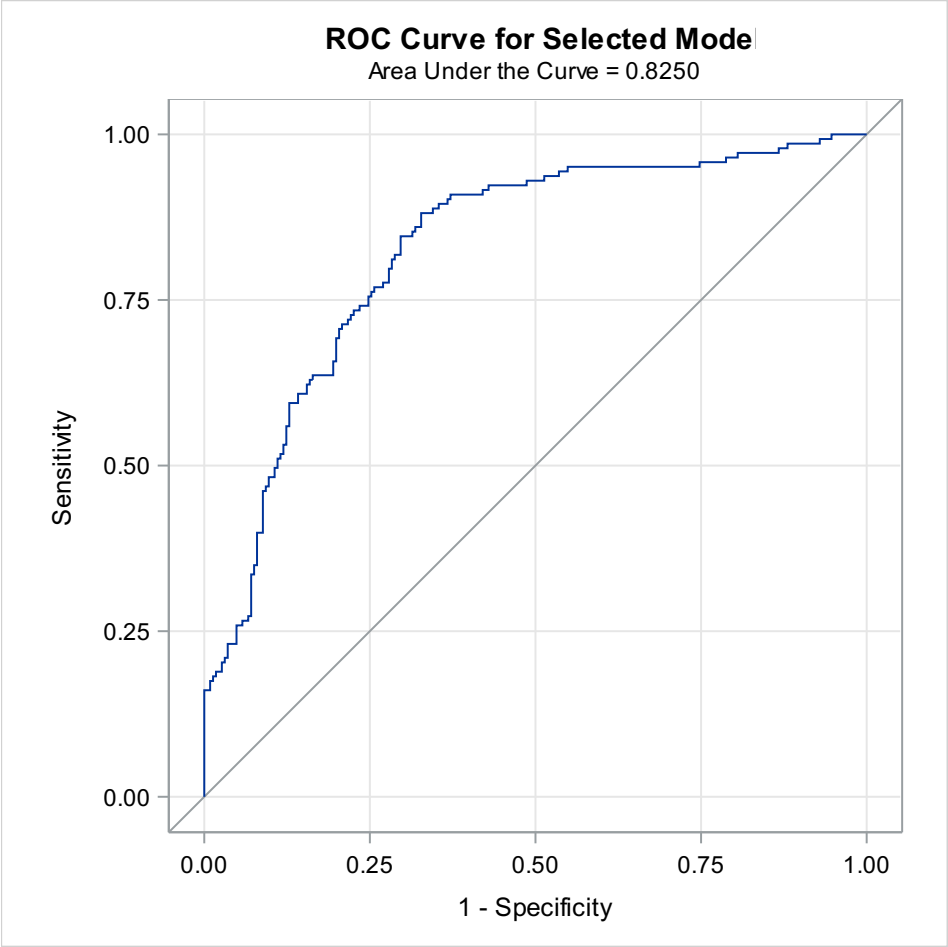
Final Model identifies Biomarkers predictive of Primary Endpoint with high accuracy (82.5%)

Statistically significant treatment effect on Primary Endpoint (p=0.003)

Stepwise logistic model	Post baseline
ENCALS Model*	✓
MCP-1	✓, Δ
NfL	✓
Fetuin A	✓, Δ
VEGF	✓
MSR1	✓

Neuroinflammation
Neurodegeneration
Neuroprotection

✓ biomarker
Δ change in biomarker



* ENCALS model Reflective of overall baseline health of participants.

Model uses terms: Age of onset, FVC, Duration from onset of symptoms to first treatment, Bulbar onset, ALSFRS-R slope, 'Definite' ALS

Update

Recent Updates	Increased understanding of clinical outcomes related to baseline subgroups	New biomarker analyses
• Phase 3 biomarkers presented at MND, Dec. 2021 by Dr Robert Brown, UMass • Phase 3 study published in Muscle & Nerve, Dec. 2021 • Dosing extended for participants enrolled in EAP protocol, Jan. 2022	• BCT-002 enrolled a more advanced ALS population • Safety confirmed across the broad ALS population enrolled • Consistent clinical outcomes observed in less advanced disease across all pre-specified endpoints	• Individual CSF biomarkers consistently demonstrate statistically significant treatment effects compared to placebo in all participants • Principal component analysis confirms treatment effects across key biomarker categories • Statistical modeling predicts clinical outcomes with high accuracy (82.5%)

Manufacturing Sites

City of Hope

City of Hope Center for Biomedicine & Genetics

DANA-FARBER CANCER INSTITUTE

Dana-Farber Harvard Cancer Center

Cell Manipulation Core

Treatment Centers

University of Massachusetts Medical School

MASSACHUSETTS GENERAL HOSPITAL

MAYO CLINIC

UCIRVINE

CEDARS-SINAI

Sutter Health
Sutter Pacific Medical Foundation

Funding

CIRM
CALIFORNIA'S STEM CELL AGENCY

ALS ASSOCIATION

I AM ALS