BrainStorm Cell Therapeutics

NASDAQ: BCLI

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COO/CMO

February 11, 2019

Forward Looking Statement

Statements in this announcement other than historical data and information constitute "forward-looking statements" and involve risks and uncertainties that could cause BrainStorm Cell Therapeutics Inc.'s actual results to differ materially from those stated or implied by such forward-looking statements. Terms and phrases such as "may", "should", "would", "could", "will", "expect", "likely", "believe", "plan", "estimate", "predict", "potential", and similar terms and phrases are intended to identify these forward-looking statements. The potential risks and uncertainties include, without limitation, risks associated with BrainStorm's limited operating history, history of losses; minimal working capital, dependence on its license to Ramot's technology; ability to adequately protect the technology; dependence on key executives and on its scientific consultants; ability to obtain required regulatory approvals; and other factors detailed in BrainStorm's annual report on Form 10-K and quarterly reports on Form 10-Q available at http://www.sec.gov.

These factors should be considered carefully, and readers should not place undue reliance on BrainStorm's forward-looking statements. The forward-looking statements contained in this press release are based on the beliefs, expectations and opinions of management as of the date of this press release. We do not assume any obligation to update forward-looking statements to reflect actual results or assumptions if circumstances or management's beliefs, expectations or opinions should change, unless otherwise required by law. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements.

Brainstorm at a Glance

Clinical stage biotechnology company developing innovative autologous cellular therapies for neurodegenerative disease

Actively recruiting phase 3 clinical trial in ALS, an orphan disease with no existing cure and limited treatment options

Large addressable markets – progressive MS (500K US) and ALS (30K US)

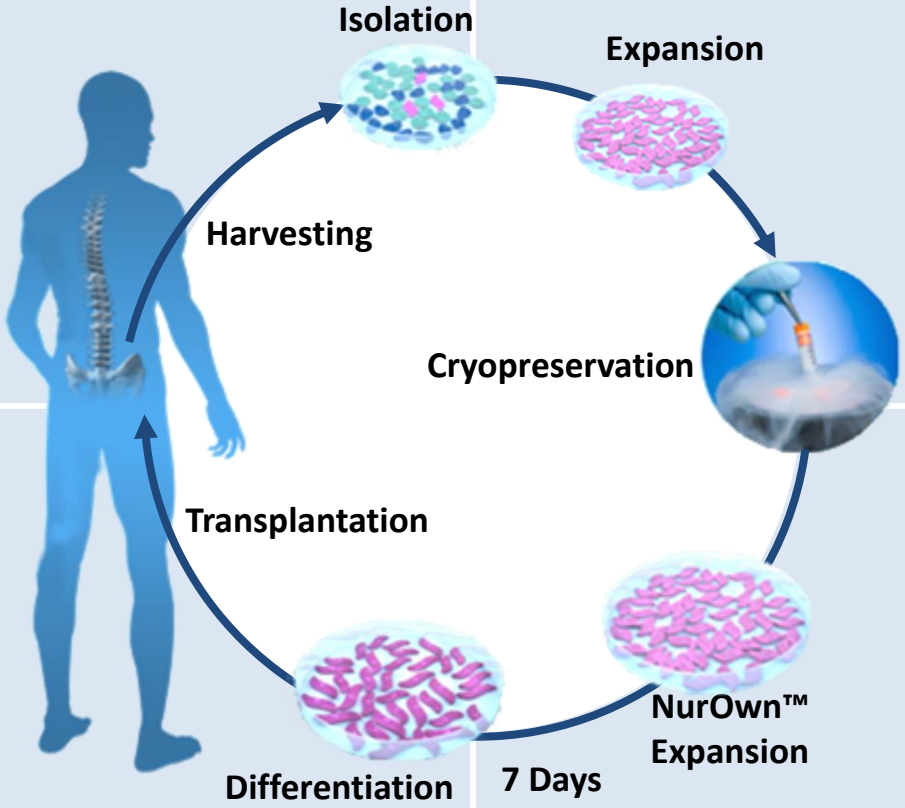
Proven technology platform and strong manufacturing capabilities

Robust IP portfolio

NurOwn® Process

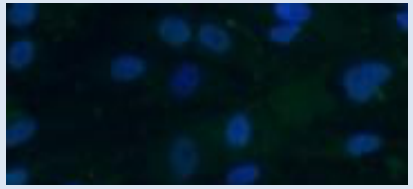
1

Manufacturing process begins with a bone marrow aspiration to harvest adult MSCs from the patient



2

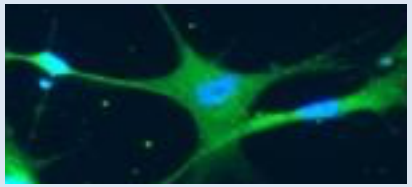
Intermediate MSC product is cryopreserved



The proprietary culture medium induces the cells to secrete additional key neurotrophic factors (MSC-NTF cells)

3

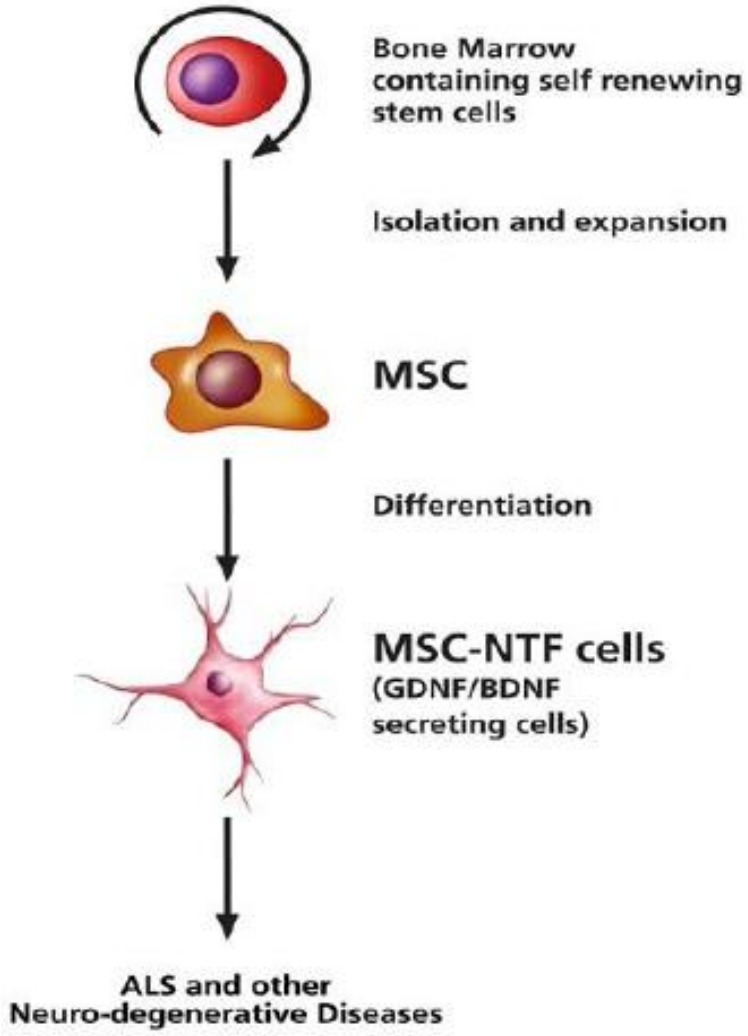
The cells are injected into the cerebrospinal fluid (CSF) of patients



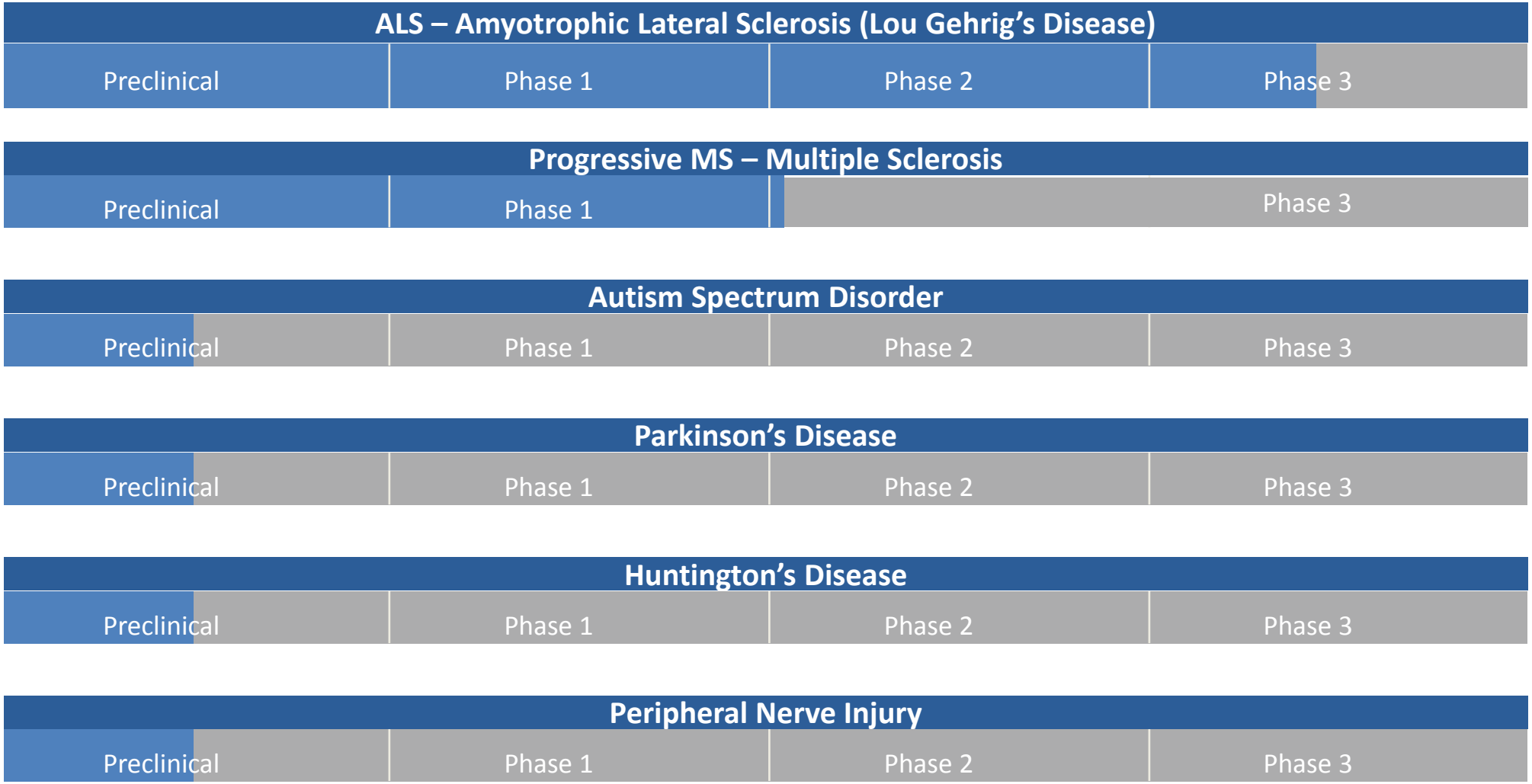
4

NurOwn® Technology Platform

- Autologous MSCs derived from bone marrow
- Intermediate cryopreserved MSC product allows for 3 years of treatment from a single bone marrow aspiration
- Final differentiated product are NTF-secreting MSCs
- Dual mechanism of action- immunomodulation and neuroprotection through secreted NTFs and anti-inflammatory cytokines



Pipeline



Source: Company filings, equity research, company website.

ALS Incidence

brainstorm cell therapeutics

What is ALS?

Amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease [(1)], is a progressive neurodegenerative disease that affects the function of nerves and muscles. This debilitating condition usually affects people aged 40 to 70, however, individuals in their 20s and 30s have also been known to develop ALS.

Future Predictions

Researchers have predicted that the number of worldwide ALS cases will increase by 69% in 2040, compared to 2015. The main cause of this projected increase is due to an ageing population, particularly in developing nations.

*It is estimated that **450,000** people worldwide are living with ALS, with over **30,000** people in the U.S. suffering from this neurodegenerative condition at any given time.*

Someone is diagnosed with ALS every

90

minutes

New US cases per year

6,000

$6B

annual health care cost

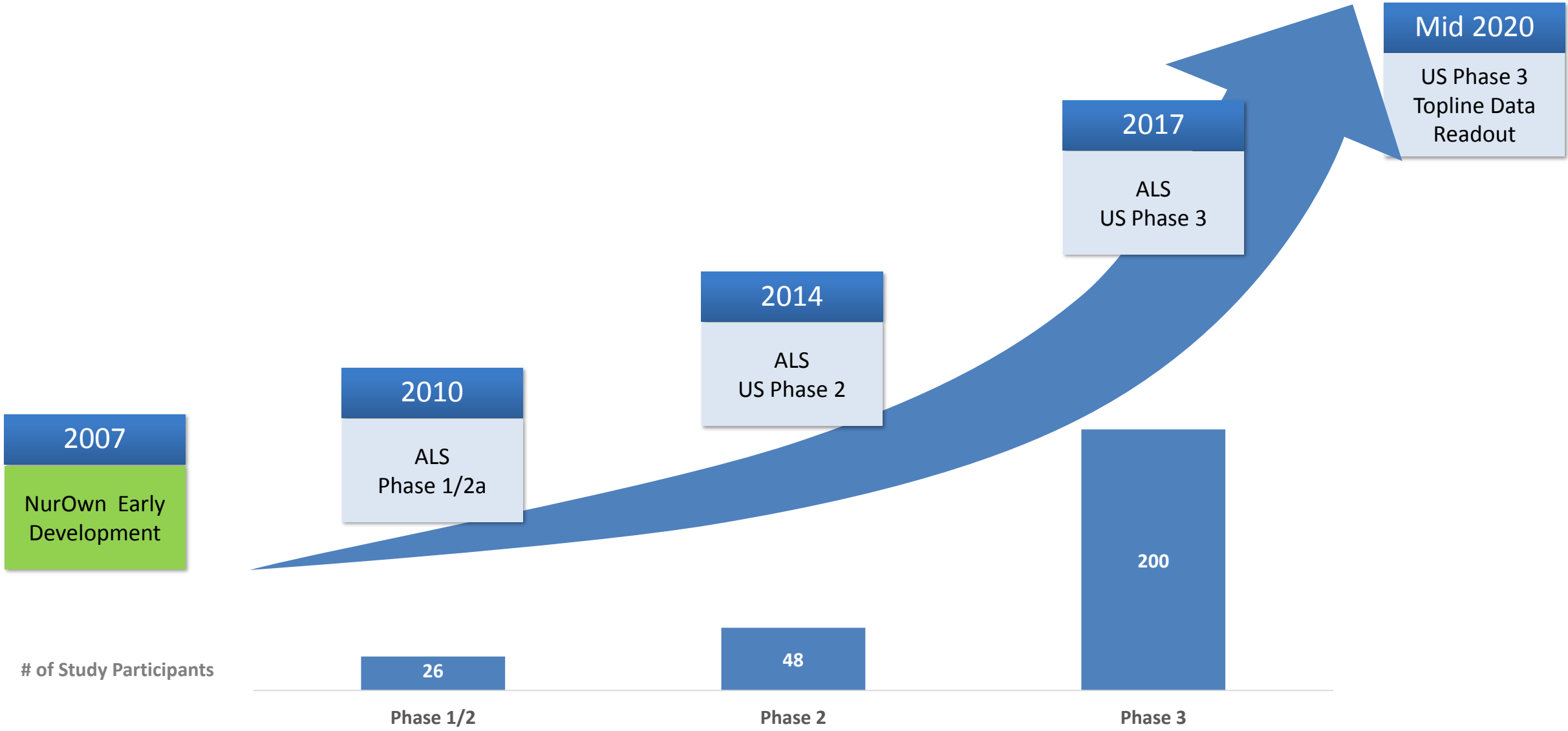
30

months

Life expectancy from diagnosis

(1) Lou Gehrig was a famous American baseball player diagnosed with ALS in 1939.

NurOwn® ALS Development



ALS Phase 2 Trial Design and Safety Outcomes

Safety Design

- 48 participants (16 per site)
- Randomized 3:1
- Blinded to allocation

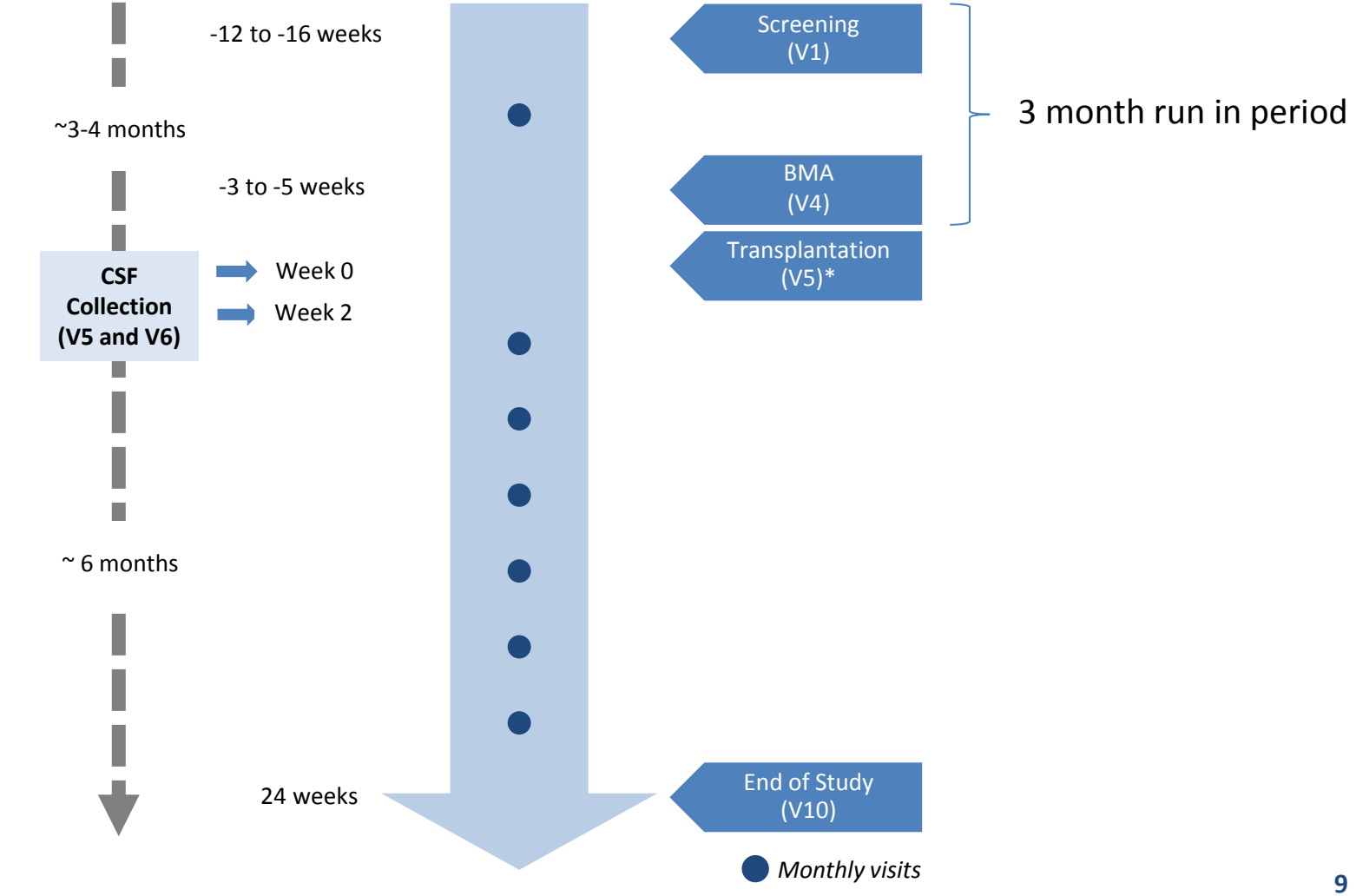
Primary Outcomes

- No deaths or treatment related SAEs
- No drop outs related to SAEs
- Most common adverse events transient and mild/moderate severity and procedure related

Efficacy

- ALSFRS-R
- SVC

Study Timeline



Phase 2 Trial – Approach to Data Analysis

Phase 2 Trial Efficacy Analysis

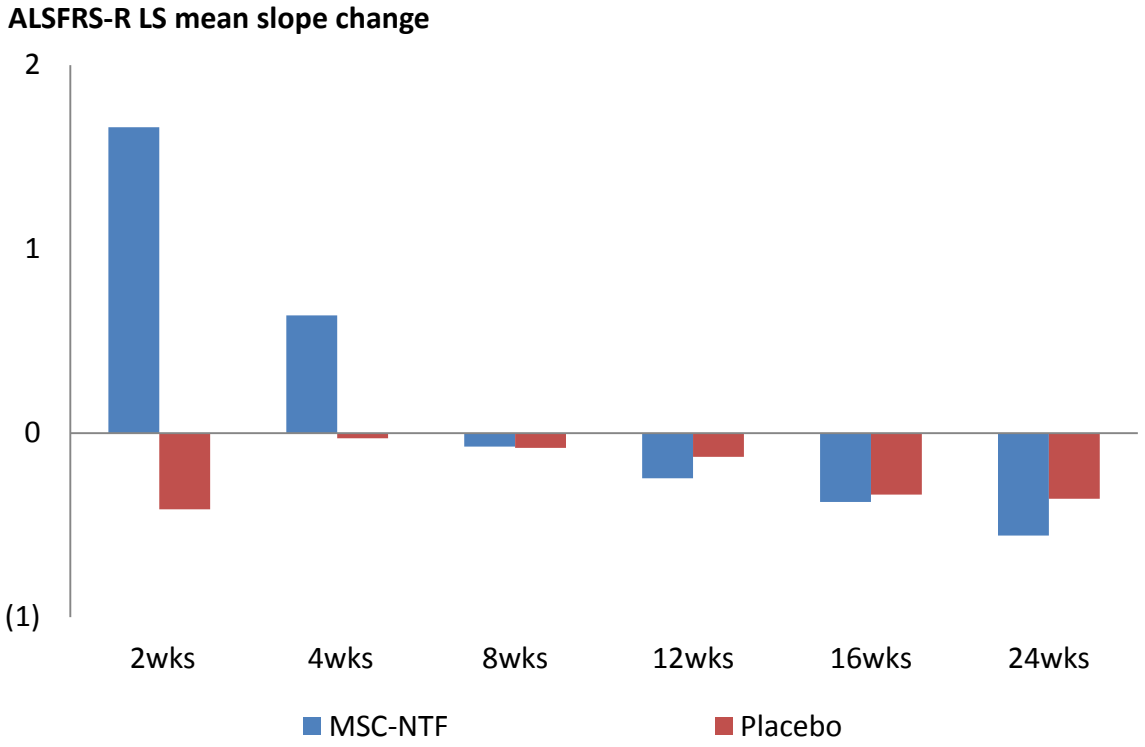
- Mean change in ALSFRS-R slope
- ALSFRS-R Responder Analysis
- Rapid progressor subgroup prespecified

ALS Rapid Progressor Subgroup

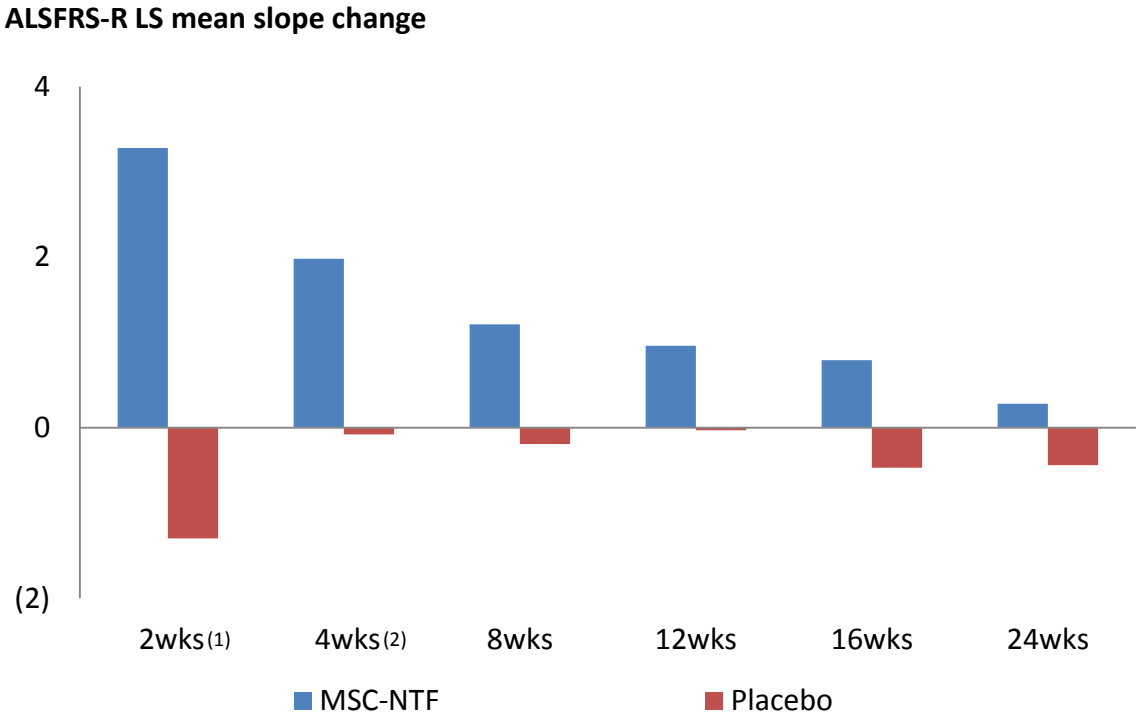
- ✓ Higher correlation of ALSFRS-R change with survival
- ✓ Higher response rate
- ✓ Higher levels of CSF inflammatory biomarkers

ALSFRS-R slope improvement (mean pre-post LS mean slope change/month)

All participants (n=46)



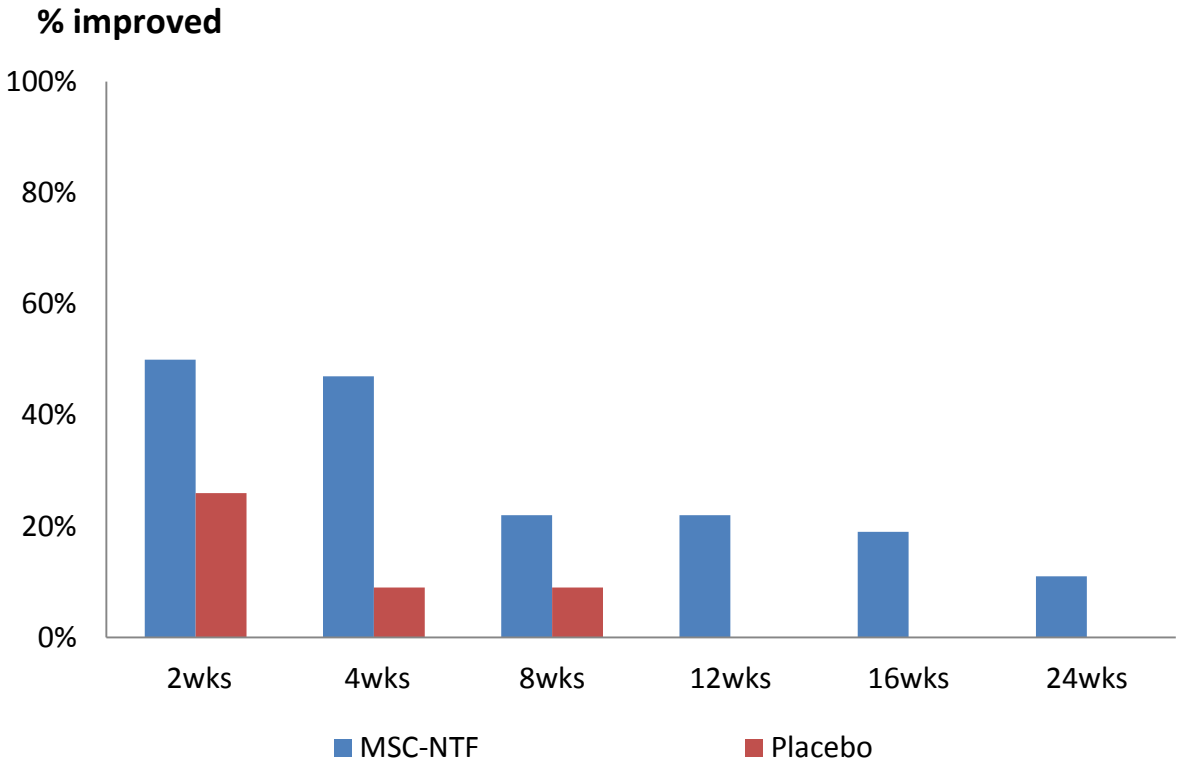
Rapid progressors (n=21)



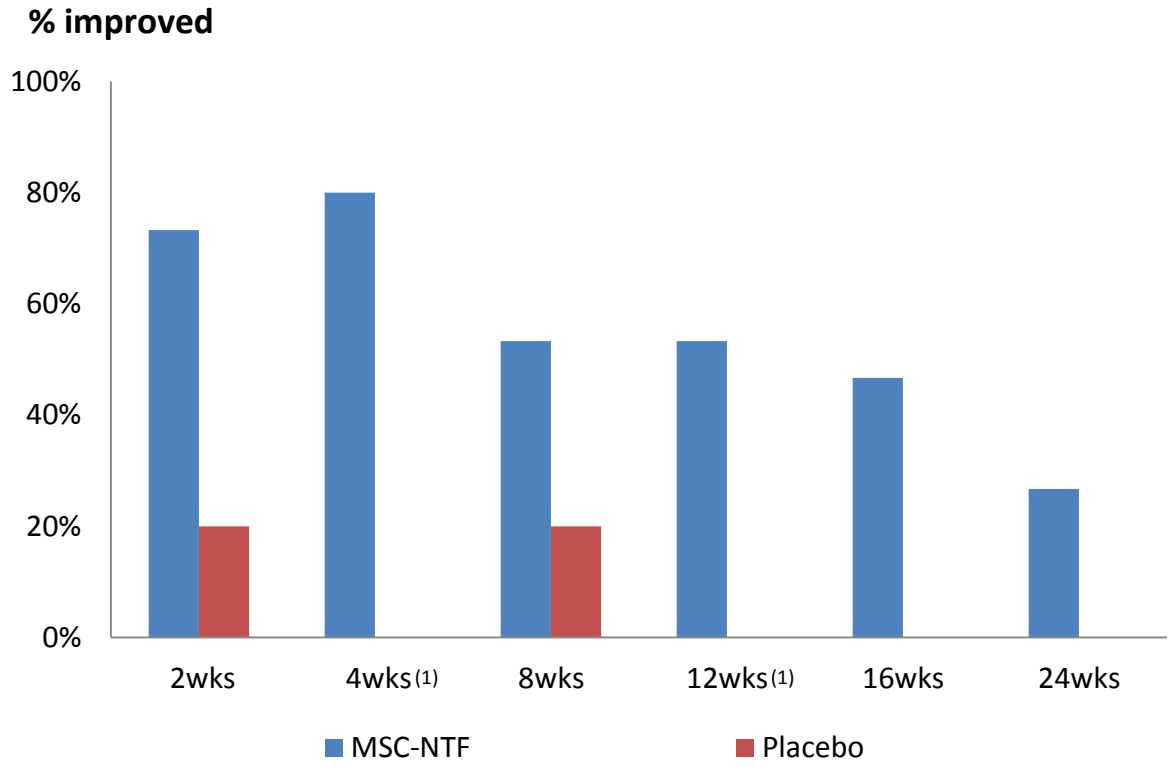
1. *p=0.021*
2. *P=0.033*

Responder Analysis: ≥1.5 points/month ALSFRS-R slope improvement

All participants (n=46)



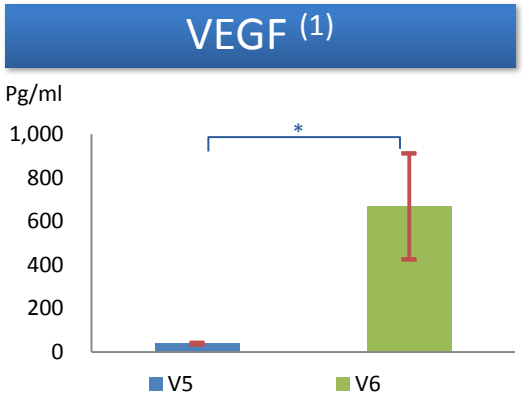
Rapid progressors (n=21)

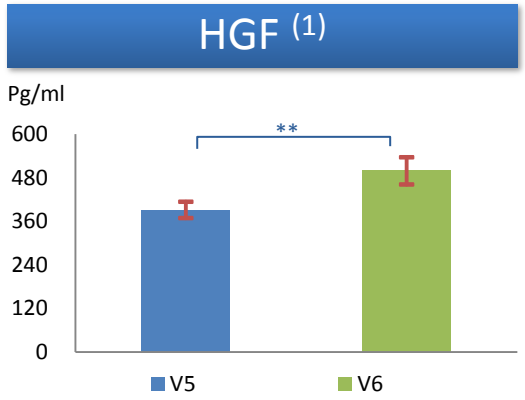


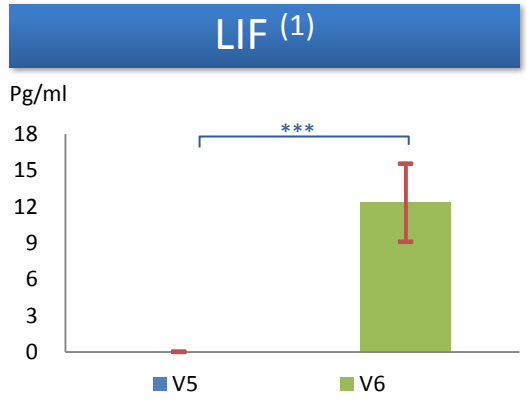
1. *p<0.05 (two-sided Fisher's exact test)*

NurOwn® Phase 2 ALS Biomarkers: CSF NTFs Significantly Increased 2 Weeks Post-Treatment Compared to Baseline

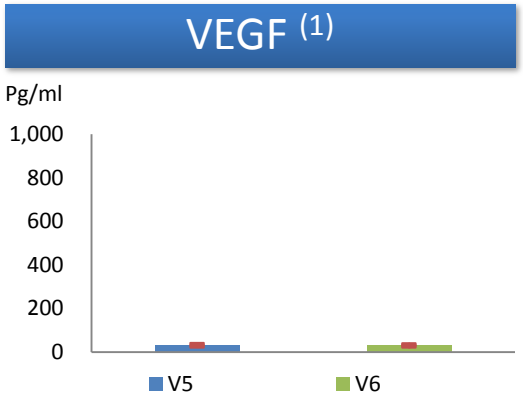
NurOwn®
(n = 26)

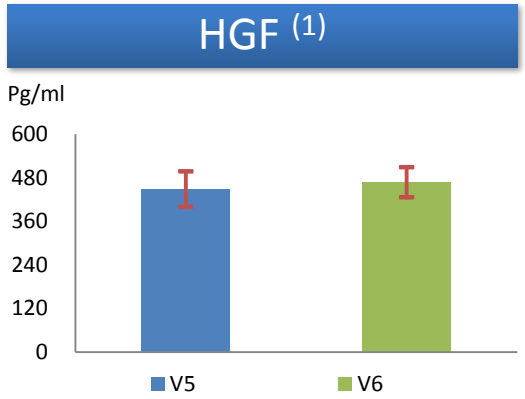


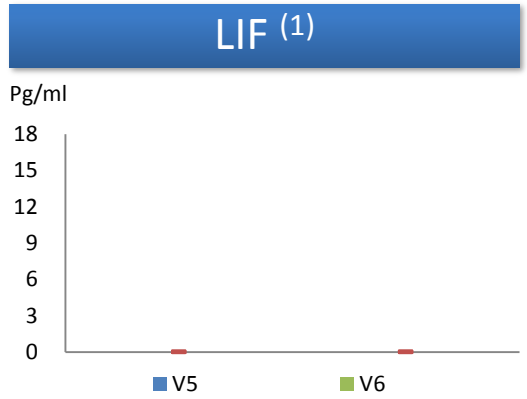




Placebo
(n = 9)







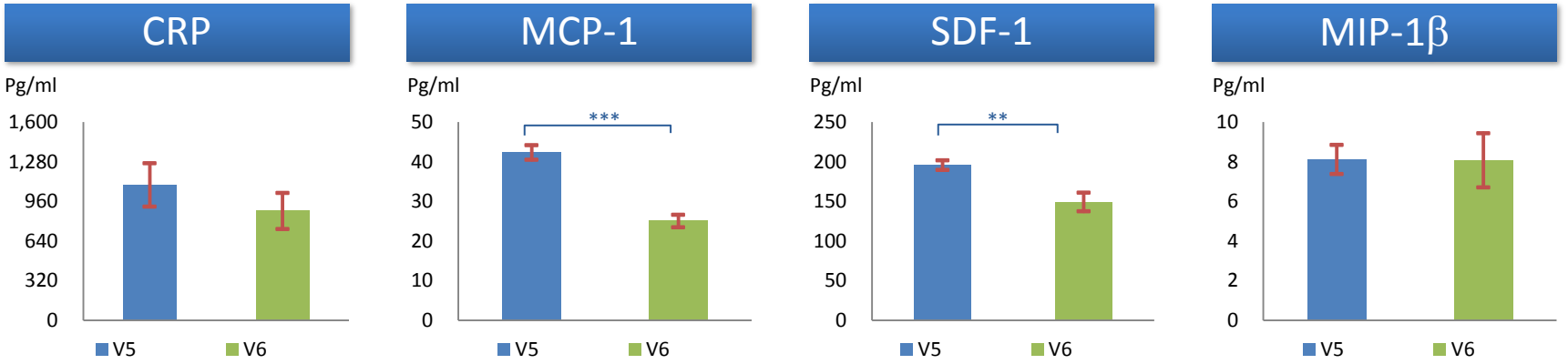
Pre transplantation

Post transplantation

1. *Mean ± SEM. p< 0.05, p<0.01, p< 0.001 for VEGF, HGF and LIF, respectively.*

NurOwn® Phase 2 ALS Biomarkers: CSF Inflammation Significantly Decreased 2 weeks Post-Treatment Compared to Baseline

NurOwn®
(n = 26)



Placebo
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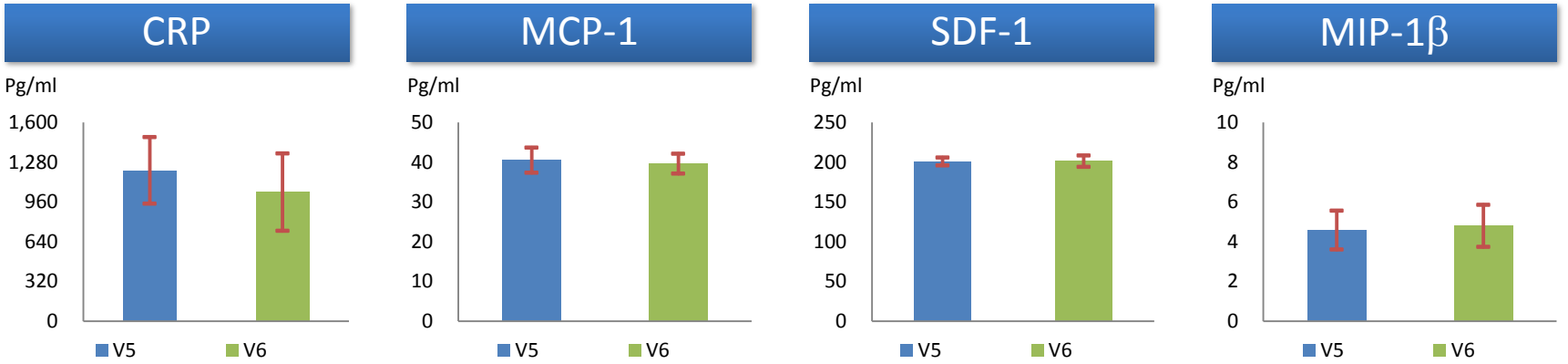


Pre transplantation

Post transplantation

1. *Mean ± SEM. p<0.01, p< 0.001 for [], respectively.*

NurOwn® Phase 2 ALS Trial Summary

- Intrathecal treatment was safe and well tolerated
- Repeat dosing is needed
- Rapid progressor subgroup showed higher efficacy
- Biomarkers confirmed mechanism of action

NurOwn® ALS Phase 3 Clinical Trial

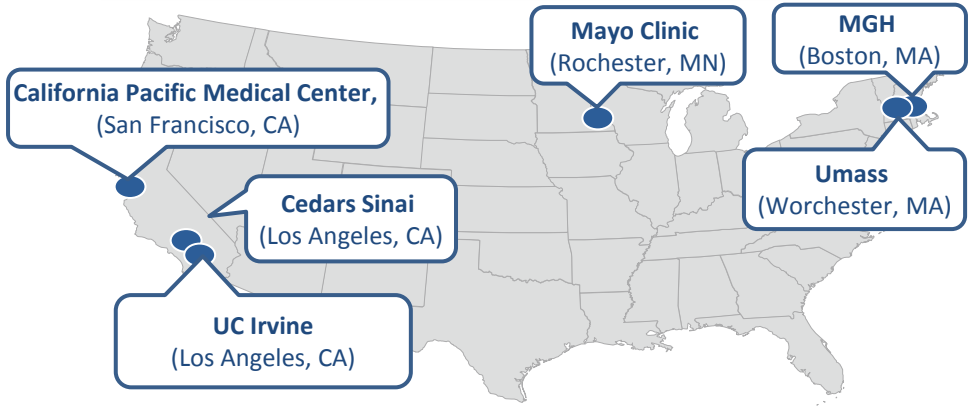
Pre-Treatment

- Inclusion criteria
  - Less than 60 years of age
  - SVC > 65%
  - ALS ≤ 2 years
  - Rapid progressors
- Exclusion criteria
  - Edaravone
  - Ventilation
  - Feeding tube
- Randomization
- Bone Marrow Aspiration

Treatment

- N=200 patients
  - Enrollment completed by mid-2019
- 1:1 randomization
- Study duration: 11.5 months
  - Seven months post-first transplantation
- Top-line data expected mid 2020

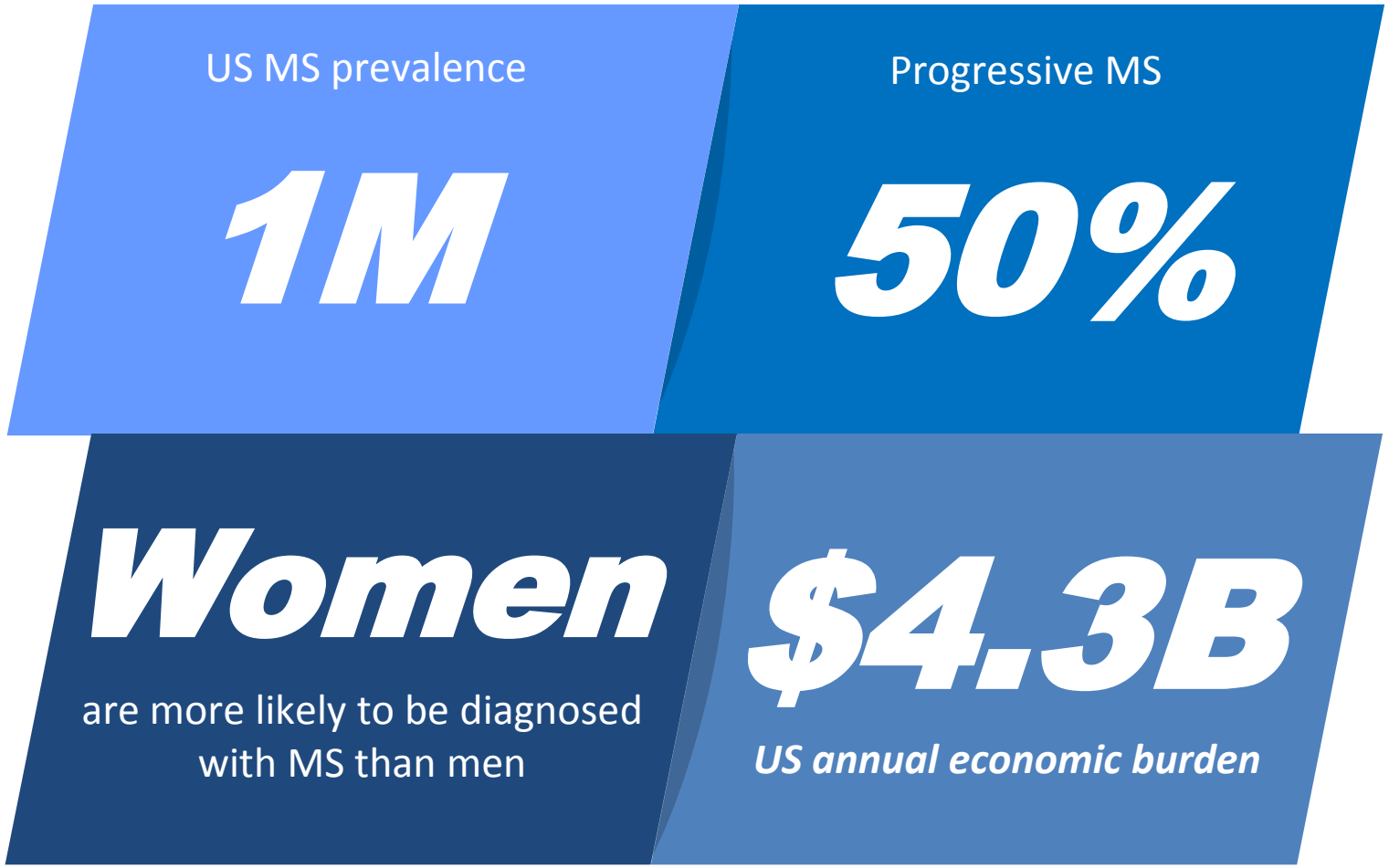
Site Location



Outcomes

- ALSFRS-R responder analysis (post-treatment slope change)
- Safety
- ALSFRS-R change from baseline
- SVC
- Tracheostomy-free survival
- CSF/biomarkers (seven samples over six months)

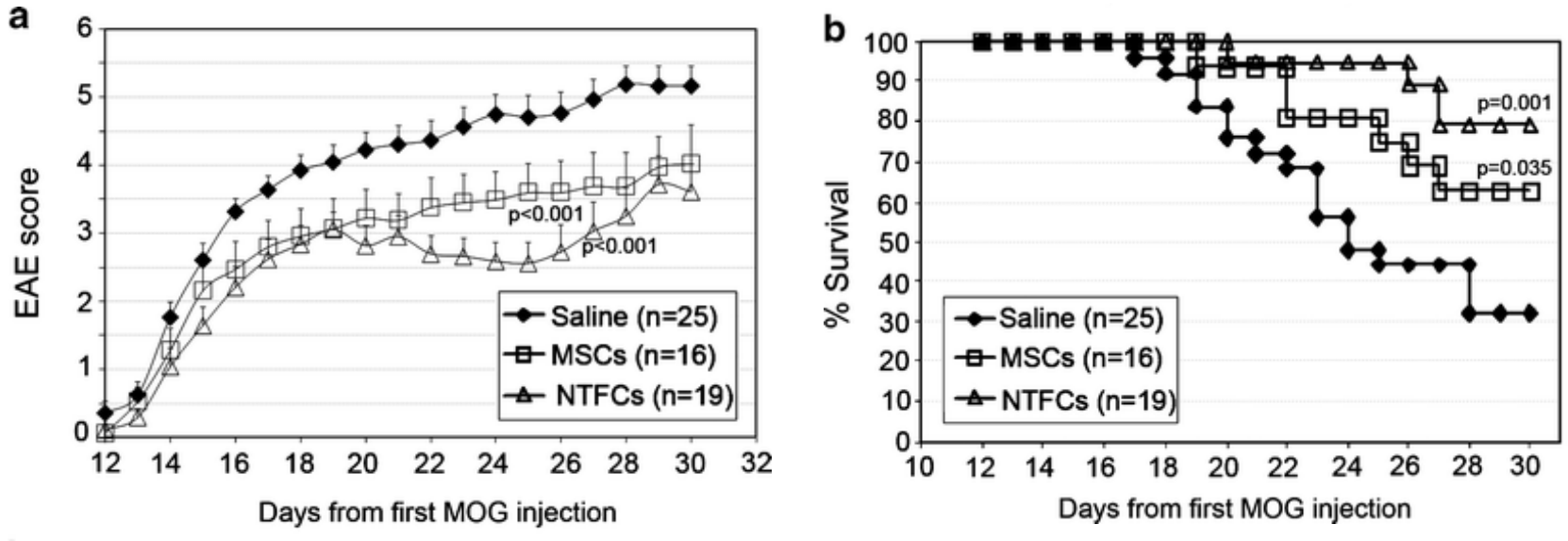
Progressive MS Unmet Need



Nature Review Disease Primers. November 2018

MS Preclinical

EAE Model



Intracerebroventricular injection of 2.5X10^5 cells

Barhum et al 2009 J. Mol. Neur.

MS Phase 2 Clinical Trial

- IND granted December 2018
- Repeat dosing intrathecal MSC-NTF cells (NurOwn®)
- 5 leading US MS centers
- Validated MS outcomes and biomarkers
- First patient to be treated Q1 2019, top line data mid 2020

Financial Highlights

$US in Thousands (except for Shares, Warrants and Options data)	September 30, 2018
Cash and cash equivalents	697
Short-term deposit	10,194
Non-Dilutive Grants (1)	8,000
Total Liquidity	**18,891**
Cap Structure	
Debt	-
Shares Outstanding (including outstanding Warrants and Options)	20,700,713
Options / Warrants outstanding	1,457,620 / 4,578,867
Net Operating Loss	88,640

(1) Supported by $16 million CIRM and $2 million Israel Innovation Authorities grants

BrainStorm Management Team

Chaim Lebovits
President and CEO

Ralph Kern, MD, MHSc.
COO and CMO

Eyal Rubin
EVP, CFO

Mary Kay Turner
VP, Patient Advocacy and Government Affairs

Joe Petroziello BS MS
VP, Scientific and Corporate Communications

Yael Gothelf PhD.
VP, Scientific and Regulatory Affairs

Uri Yablonka
EVP, Chief Business Officer

Yossef Levy PhD.
VP, Cell Production

Revital Aricha PhD.
VP, R&D

Susan Ward PhD
Head Clinical Research Operations

BrainStorm Cell Therapeutics

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Thank You

Appendix

Additional Professional Board Members

June S. Almenoff MD PhD

- Chief Operating Officer & Chief Medical Officer of Innovate Biopharmaceutical
- Formerly President and CMO of Furiex Pharmaceuticals and Board member of Tigenix NV (TIG)

Tony Polverino PhD

- CSO - Kite Pharmaceuticals

Scientific Advisory Board

Jerold Chun, M.D., PhD -Chair

- Neuroscientist, Professor and Senior Vice President of Neuroscience Drug Discovery, Sanford Burnham Prebys Medical Discovery Institute, San Diego CA.

Stanley H. Appel, M.D

- Peggy and Gary Edwards Distinguished Endowed Chair for the Treatment and Research of ALS, Department of Neurology, Neurological Institute, Houston Methodist Hospital, Houston TX.

Amit Bar-Or, M.D.

- Presidential Endowed Chair at the University of Pennsylvania (UPenn/CHOP), Director of the Centre for Neuroinflammation and Experimental Neurotherapeutics and Chief, MS Division, Philadelphia PA.

IP Portfolio

Patent Name/ Int. App. No.	Pending Jurisdictions	Allowed Jurisdictions	Granted Jurisdictions	Expiry Date
ISOLATED CELLS AND POPULATIONS COMPRISING SAME FOR THE TREATMENT OF CNS DISEASES/PCT/IL2006/000699	US		Europe, US	2030
MESENCHYMAL STEM CELLS FOR THE TREATMENT OF CNS DISEASES PCT/ IL2009/000525		Hong Kong	US, Europe, Israel	2032
METHODS OF GENERATING MESENCHYMAL STEM CELLS WHICH SECRETE NEUROTROPHIC FACTORS / PCT/IL2013/050660	Europe, Hong Kong, Israel, Canada, Brazil, Japan	Israel	US, Japan	2038
METHOD OF QUALIFYING CELLS /PCT IL2015/050159	US, Europe, Hong Kong, Israel, Canada, Brazil, Japan			2040
Methods of treating ALS PCT/IL2017/050801	PCT			2042