

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**FORM 8-K**

**CURRENT REPORT  
Pursuant to Section 13 OR 15(d)  
of The Securities Exchange Act of 1934**

**Date of Report (Date of earliest event reported): June 15, 2023**

**CLENE INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or Other Jurisdiction  
of Incorporation)

**001-39834**

(Commission File Number)

**85-2828339**

(IRS Employer  
Identification No.)

**6550 South Millrock Drive, Suite G50  
Salt Lake City, Utah**

(Address of Principal Executive Offices)

**84121**

(Zip Code)

**(801) 676-9695**

(Registrant's telephone number, including area code)

**N/A**

(Former Name or Former Address, if Changed Since Last Report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

**Securities registered pursuant to Section 12(b) of the Act:**

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.0001 par value	CLNN	The Nasdaq Capital Market
Warrants, to acquire one-half of one share of Common Stock for \$11.50 per share	CLNNW	The Nasdaq Capital Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

**Item 7.01 Regulation FD Disclosure.**

In connection with the press release discussed under Item 8.01 in this Current Report on Form 8-K, on June 15, 2023, Clene Inc. (the “Company”) released an updated corporate presentation (the “Corporate Presentation”) on its website, invest.clene.com. A copy of the Corporate Presentation is furnished as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference. The Company plans to use its website to disseminate future updates to the Corporate Presentation and may not file or furnish a Current Report on Form 8-K alerting investors if the Corporate Presentation is updated.

The information furnished in this Item 7.01, including Exhibit 99.1, shall not be deemed to be “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 (the “Exchange Act”), as amended, or otherwise subject to the liabilities of that section, and shall not be deemed to be incorporated by reference into any filing made by the Company under the Exchange Act or the Securities Act of 1933, as amended, regardless of any general incorporation language in any such filings, except as shall be expressly set forth by specific reference in such a filing.

**Item 8.01 Other Events.**

On June 15, 2023, the Company issued a press release announcing CNM-Au8® shows a statistically significant difference in plasma neurofilament light levels in the HEALEY ALS Platform Trial in amyotrophic lateral sclerosis. A copy of the press release is filed as Exhibit 99.2 to this Current Report on Form 8-K and is incorporated herein by reference.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits

<u>Exhibit Number</u>	<u>Exhibit Description</u>
99.1	<a href="#">Corporate Presentation.</a>
99.2	<a href="#">Press Release, dated June 15, 2023, announcing Clene’s CNM-Au8® shows statistically significant difference in plasma neurofilament light levels in the HEALEY ALS Platform Trial.</a>
104	Cover Page Interactive Data File (formatted as Inline XBRL).

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, hereunto duly authorized.

Date: June 15, 2023

CLENE INC.

By: /s/ Robert Etherington  
Robert Etherington  
President and Chief Executive Officer



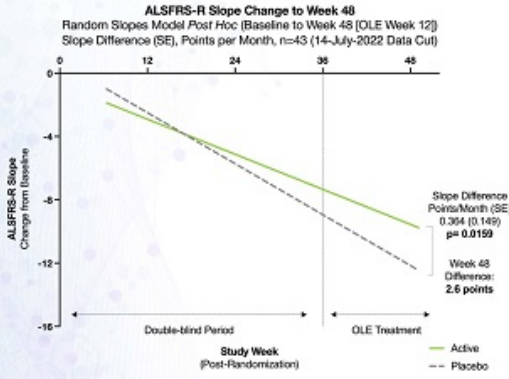
clene.com



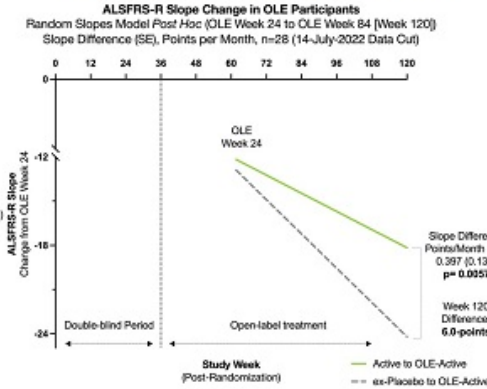
NASDAQ: CLNN

Early CNM-Au8 Treatment Impacts Long-Term Function Compared to Original Placebo

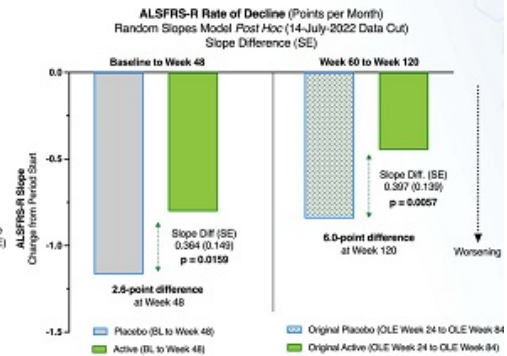
ALSFRS-R Slope  
Baseline to Week 48



ALSFRS-R Slope  
Week 60 [OLE Week 24] to Week 120



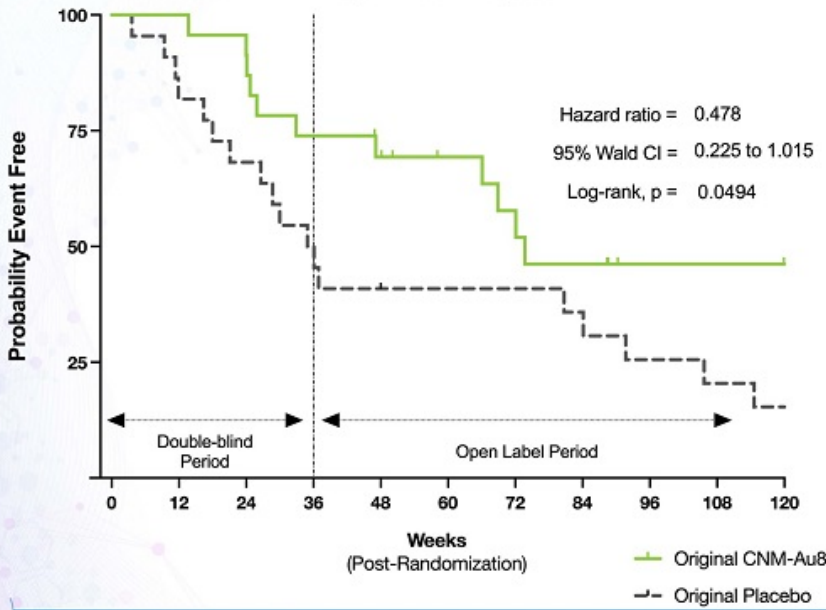
ALSFRS-R Slope  
Summary



- CNM-Au8 preserved functional decline: ALSFRS-R of 2.6 points at 48 weeks compared to placebo
- Early CNM-Au8 treatment preserved long-term ALSFRS-R score by 6.0 points vs. OLE original placebo

OLE 12-month LPLV data cut of July 14, 2022.

**Rescue-ALS OLE Disease Progression Events**  
 Proportion Event Free by Study Visit (14-July-2022 Data Cut)  
 Kaplan-Meier Analyses



The risk of ALS clinical worsening was decreased ~50% for CNM-Au8 compared to placebo in OLE up-to-120 weeks

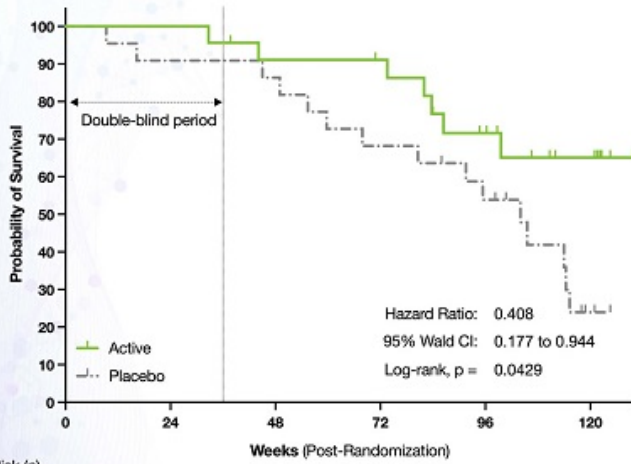
Clinical worsening events included:

- Death,
- Tracheostomy,
- Need for non-invasive ventilatory support, or
- Gastrostomy (feeding) tube placement

Clinical worsening events during the OLE period are tracked only in OLE participants

# Demonstrated Significant Impact on Long-Term Survival 60% Decreased Risk of Death through 120 weeks

**Long-Term Survival (All-Cause Mortality): Originally Randomized Active vs. Placebo**  
Interim Analysis (14-July-2022), ITT Population, All Subjects from Randomization  
(Long-term vital status including all study withdrawals)



At Risk (n)	0	24	48	72	96	120
CMM-Au8:	23	23	20	19	13	7
Placebo:	22	20	19	15	11	3

Early CNM-Au8 treatment demonstrated a significant survival benefit:

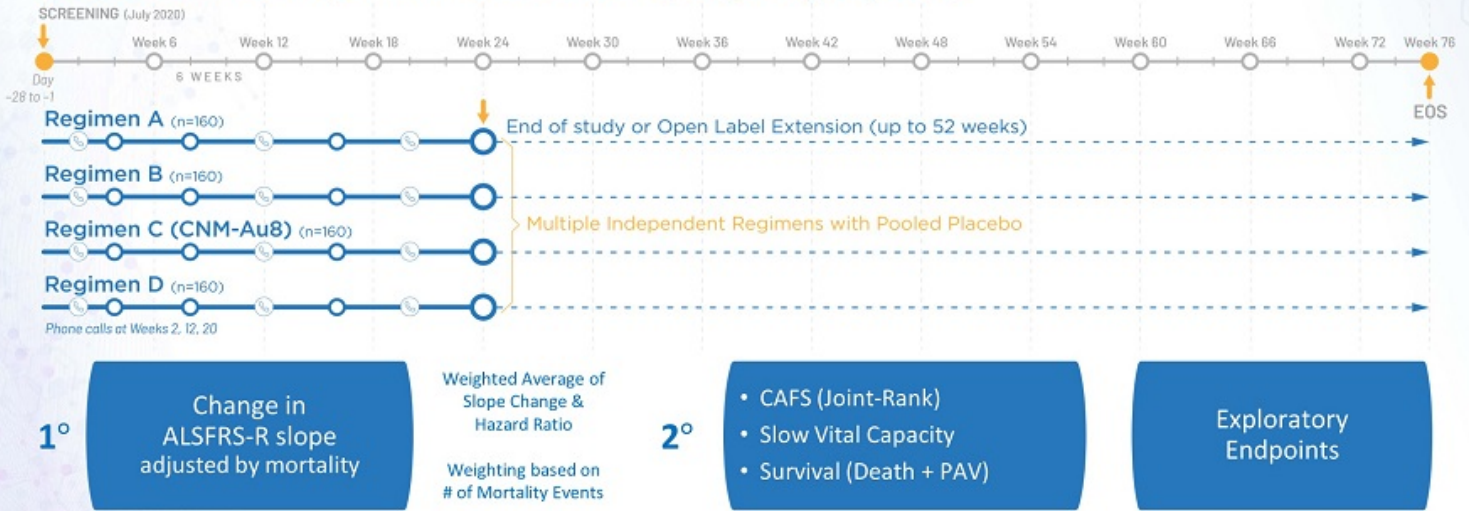
- Follow-up of active compared to initial placebo randomization\*
- 60% decreased risk of death

\*9-month delayed treatment start (ex-placebo) or no treatment

Time to all-cause mortality amongst participants originally randomized to CNM-Au8 compared to participants originally randomized to placebo through at least 12-months following the last patient last visit (14-July-2022). Vital status and date of death (as applicable) were captured for all subjects withdrawn from the study. Lost-to-follow-up (active, n=3; placebo, n=1) censored as of the date of last study contact. All OLE ex-placebo CNM-Au8 transitioned participants within the placebo group. All current active OLE subjects are right censored as of 14-July-2022.



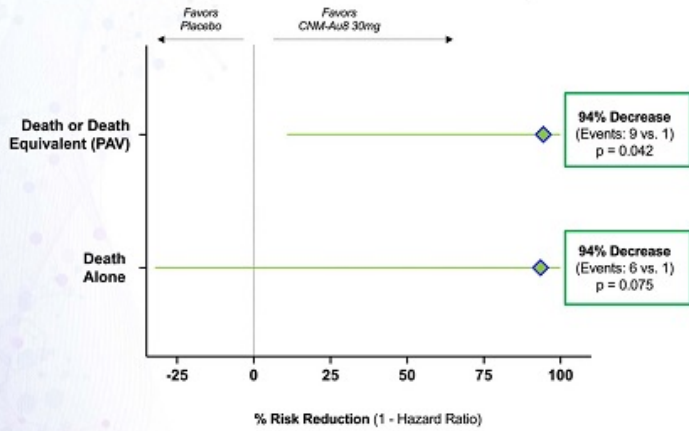
24-Week Treatment Period (3:1 randomization, 120 active [30mg, 60mg]: 40 placebo)





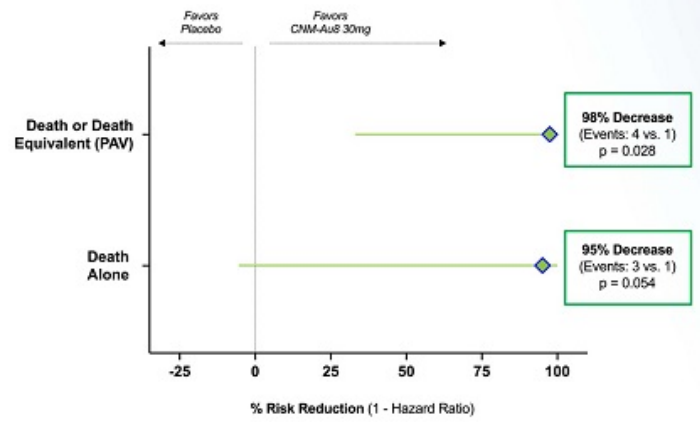
## Shared Placebo Across Regimens

**CNM-Au8 30mg Survival | Adjusted Cox Proportional Hazard**  
 Full Analysis Set (All Shared Placebo, Regimens A, B, C, D)  
 % Hazard Reduction at Week 24  
 (1 - Hazard Ratio, 95% Confidence Interval)



## CNM-Au8 Regimen Only (Regimen C)

**CNM-Au8 30mg Survival | Adjusted Cox Proportional Hazard**  
 Efficacy Regimen Only Set (Within Regimen Analysis)  
 % Hazard Reduction at Week 24  
 (1 - Hazard Ratio, 95% Confidence Interval)



PAV = Permanently Assisted Ventilation; Prespecified covariate adjustments include: (i) time from symptom onset, (ii) pre-baseline ALSFRS-R slope, (iii) riluzole use, (iv) edaravone use, (v) age. Events (placebo vs. active). p-values are not adjusted for multiple comparisons; exploratory analyses by dose.

No evidence for treatment effect at 24 weeks for either adjusted ALSFRS-R change, CAFS, or SVC (combined 30 & 60 mg doses)

# Time to Clinical Worsening Events

Death



Permanent Assisted  
Ventilation



Hospitalization  
ALS-Related and All-  
Cause



Feeding Tube  
Placement




Assisted  
Ventilation



- Time to clinical worsening events were prespecified in the protocol and analysis plan
- p-values provided are uncorrected for multiple comparisons
- Since the primary outcome was negative, the results are hypothesis generating and not confirmatory
- Combined analyses of the 30mg and 60mg doses were prespecified for primary & secondary outcomes

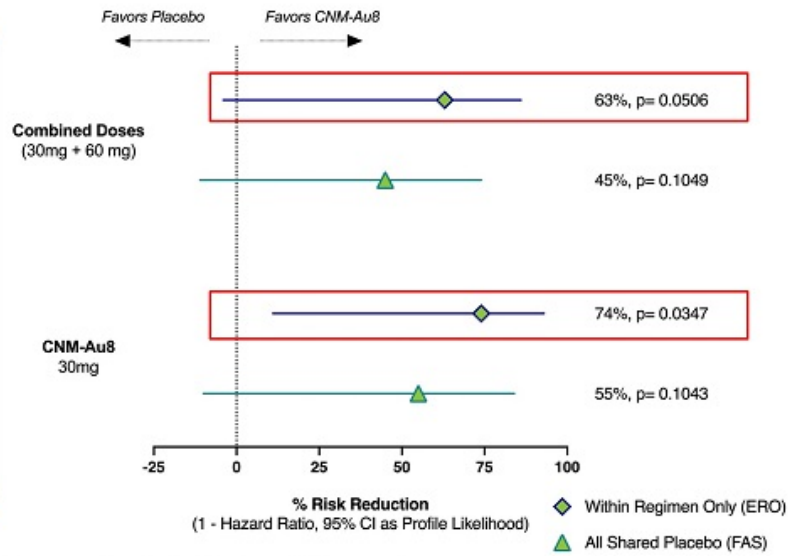
# Delayed Time to ALS Clinical Worsening (Composite)

## Clinical Worsening Composite (Time to First Instance)

-  Death
-  Tracheostomy
-  Permanent Assisted Ventilation (NIV >22 hours per day)
-  Feeding Tube Placement

## Reduction in Time to ALS Clinical Worsening (Composite)

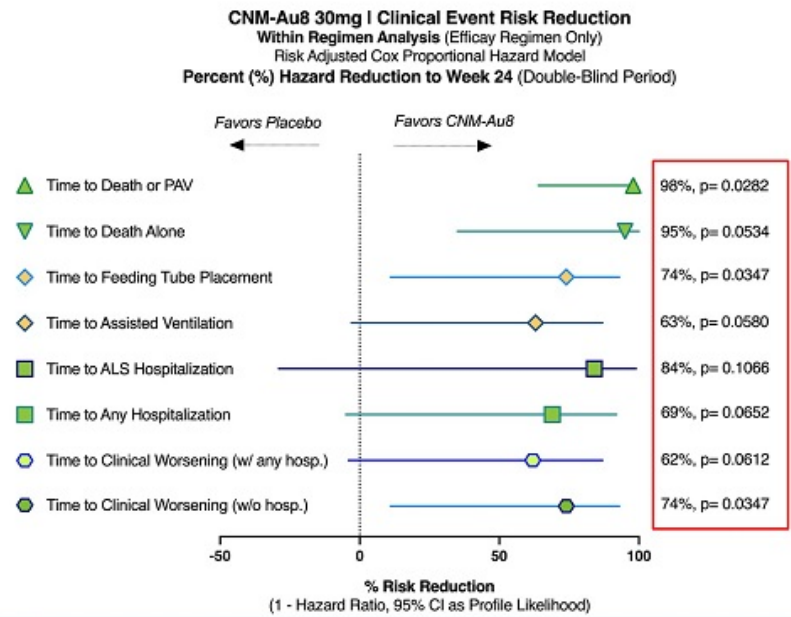
First Instance of Death, Tracheostomy, PAV, or Feeding Tube  
Risk Adjusted Cox Proportional Hazard Model (Primary Covariate Model)  
% Hazard Reduction to Week 24 (Double-Blind Period)



Prespecified covariate risk adjustments included: (i) time from symptom onset, (ii) pre-baseline ALSFRS-R slope, (iii) riluzole use, (iv) edaravone use.

For the within regimen (ERO) analysis, feeding tube placement was always the first initiating event for the composite.

CNM-Au8 30mg delayed time to clinical worsening at 6 months

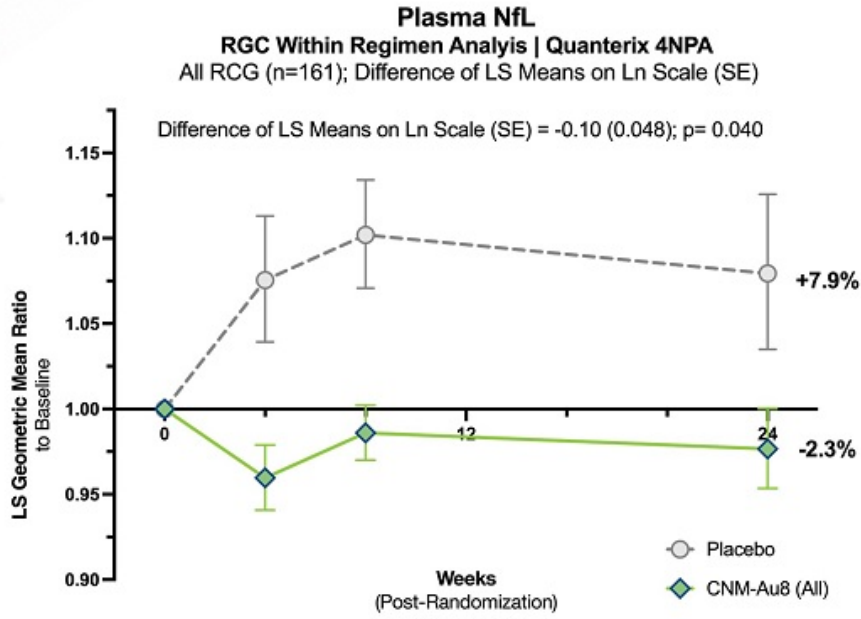


Supportive sensitivity analyses incorporating baseline neurofilament light chain (NfL) levels were similarly robust and resulted in increased effect sizes and smaller nominal p-values.

Prespecified covariate risk adjustments included: (i) time from symptom onset, (ii) pre-baseline ALSFRS-R slope, (iii) riluzole use, (iv) edaravone use.

# Plasma NfL Difference | CNM-Au8 vs. Placebo

All RGC Participants

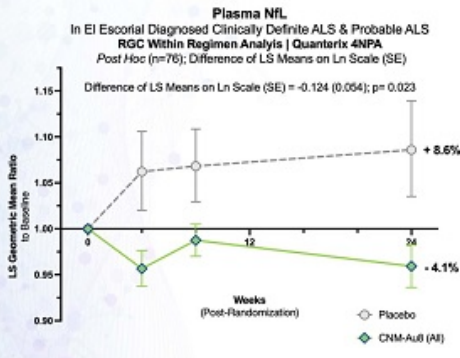


MMRM log NfL by group; prespecified covariates included: (i) pre-treatment ALSFRS-R slope (delta-FS), (ii) months from symptom onset, (iii) use of riluzole, (iv) use of edaravone; (v) covariate by visit interaction, (vi) treatment by visit interaction

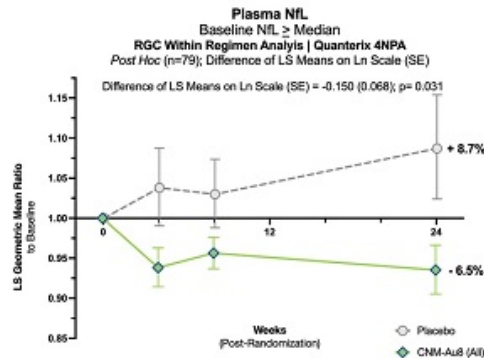
# Consistent Plasma NfL Effects in Higher Risk Patients

Sensitivity Analyses | In Definite and Probable ALS; Higher Baseline NfL Levels, and Fast Progressors (Post Hoc)

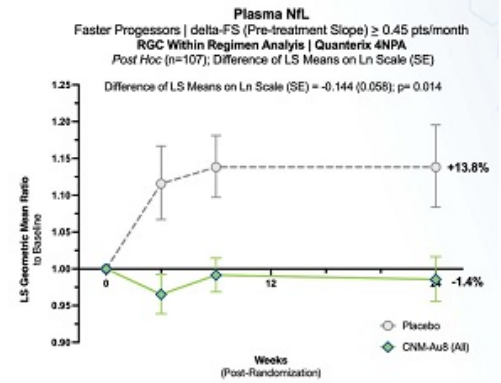
## Definite & Probable ALS



## Baseline NfL $\geq$ Median



## Fast Progressors



MMRM log NfL by group; prespecified covariates included: (i) pre-treatment ALSFRS-R slope (delta-FS), (ii) months from symptom onset, (iii) use of riluzole, (iv) use of edaravone; (v) covariate by visit interaction, (vi) treatment by visit interaction



# Forward Looking Statements

This presentation contains “forward-looking statements” within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended, which are intended to be covered by the “safe harbor” provisions created by those laws. Clene’s forward-looking statements include, but are not limited to, statements regarding our or our management team’s expectations, hopes, beliefs, intentions or strategies regarding our future operations. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. The words “anticipate,” “believe,” “contemplate,” “continue,” “estimate,” “expect,” “intends,” “may,” “might,” “plan,” “possible,” “potential,” “predict,” “project,” “should,” “will,” “would,” and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. These forward-looking statements represent our views as of the date of this presentation and involve a number of judgments, risks and uncertainties. We anticipate that subsequent events and developments will cause our views to change. We undertake no obligation to update forward-looking statements to reflect events or circumstances after the date they were made, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws. Accordingly, forward-looking statements should not be relied upon as representing our views as of any subsequent date. As a result of a number of known and unknown risks and uncertainties, our actual results or performance may be materially different from those expressed or implied by these forward-looking statements. Some factors that could cause actual results to differ include our substantial dependence on the successful commercialization of our drug candidates, if approved, in the future; our inability to maintain the listing of our common stock on Nasdaq; our significant net losses and net operating cash outflows; our ability to demonstrate the efficacy and safety of our drug candidates; the clinical results for our drug candidates, which may not support further development or marketing approval; actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials and marketing approval; our ability to achieve commercial success for our drug candidates, if approved; our ability to obtain and maintain protection of intellectual property for our technology and drugs; our reliance on third parties to conduct drug development, manufacturing and other services; our limited operating history and our ability to obtain additional funding for operations and to complete the licensing or development and commercialization of our drug candidates; the impact of the COVID-19 pandemic on our clinical development, commercial and other operations; changes in applicable laws or regulations; the effects of inflation; the effects of staffing and materials shortages; the possibility that we may be adversely affected by other economic, business, and/or competitive factors; and other risks and uncertainties set forth in “Risk Factors” in our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q. In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this presentation, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to rely unduly upon these statements. All information in this presentation is as of the date of this presentation. The information contained in any website referenced herein is not, and shall not be deemed to be, part of or incorporated into this presentation.

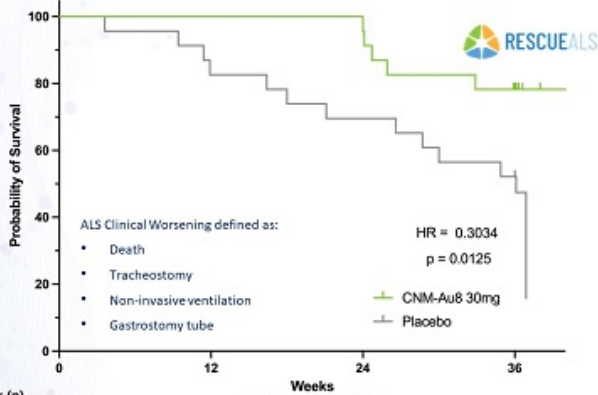


# CNM-Au8 | ALS Clinical Worsening Summary

Evidence for Decreased Clinical Worsening Events Across Two Phase 2 Studies

## Phase 2 RESCUE-ALS CNM-Au8 30mg Decreased Time to Clinical Worsening

**ALS Clinical Worsening**  
ITT Population, All Randomized  
Kaplan-Meier Estimate, Percent Event Free



ALS Clinical Worsening defined as:

- Death
- Tracheostomy
- Non-invasive ventilation
- Gastrostomy tube

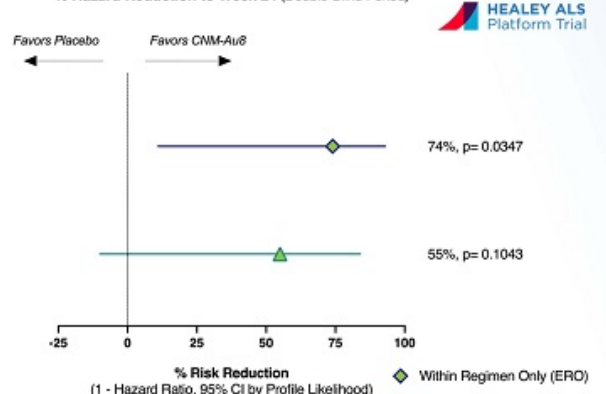
HR = 0.3034  
p = 0.0125

— CNM-Au8 30mg  
— Placebo

At Risk (n)	Weeks (Post-Randomization)			
	0	12	24	36
CNM-Au8	23	23	23	20
Placebo	22	22	18	15

## Phase 2 HEALEY ALS Platform CNM-Au8 30mg Decreased Time to Clinical Worsening

**CNM-Au8 30mg | Reduction in Time to ALS Clinical Worsening**  
First Instance of Death, Tracheostomy, Permanent Assisted Ventilation, or Feeding Tube  
Risk Adjusted Cox Proportional Hazard Model (Primary Covariate Model)  
% Hazard Reduction to Week 24 (Double-Blind Period)



ALS Clinical Worsening defined as:

- Death
- Tracheostomy
- Permanent Assisted Ventilation (PAV)
- Gastrostomy tube



# CNM-Au8 Has Demonstrated ALS Survival Benefit at 30 mg Dose in Two Phase 2 Studies

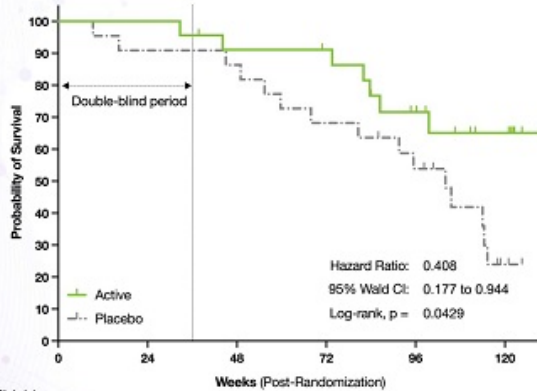


60% decreased risk of death through 120 weeks



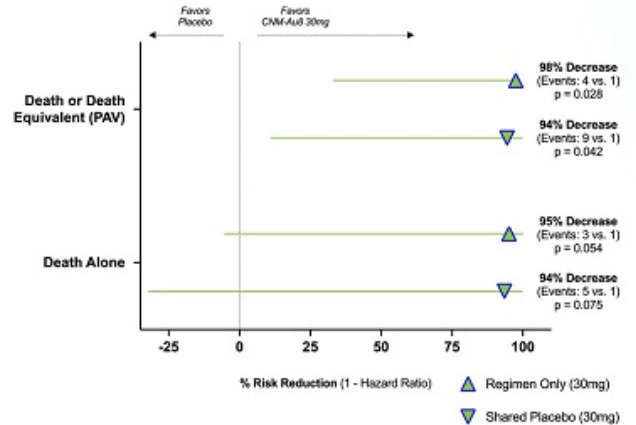
>90% risk reduction of death at 30mg at 24 weeks

**Long-Term Survival (All-Cause Mortality): Originally Randomized Active vs. Placebo**  
Interim Analysis (14-July-2022), ITT Population, All Subjects from Randomization  
(Long-term vital status including all study withdrawals)



At Risk (n)	0	24	48	72	96	120
CMM-Au8:	23	23	20	19	13	7
Placebo:	22	20	19	15	11	3

**CNM-Au8 30mg | Adjusted Cox Proportional Hazard Ratio**  
**% Risk Reduction at Week 24**  
(1 - Adjusted Hazard Ratio, 95% Confidence Interval)



## HEALEY ALS Platform Safety Summary

- Occurrence of TEAEs were balanced between CNM-Au8 and placebo
- No SAEs were assessed as related to CNM-Au8

Treatment Emergent Adverse Events (TEAEs)	All Shared Placebo (%)	Regimen Placebo (%)	CNM-Au8 30 mg (%)	CNM-Au8 60 mg (%)
Participants with Any TEAE	90%	93%	92%	93%
Participants with Related TEAEs	39%	34%	29%	43%
Participants with SAE	9%	17%	10%	16%
Participants with Related SAEs	1%	2%	0%	0%
Participants Withdrawn due to TEAE	7%	7%	7%	7%

All Shared Placebo (n=164 placebo from Regimens A, B, C, D); Regimen placebo (n=41) includes only concurrent randomization within Regimen C (CNM-Au8)

# ALS Summary | CNM-Au8 Has Demonstrated Survival Benefit and Delayed Time to Clinical Worsening and Functional Decline



## Significant Opportunity

- ALS remains a devastating and fatal disease within ~3 to 5 years of diagnosis—a significant unmet need



## CNM-Au8® Clinical Results



- Demonstrated significant ALS survival benefit at 30 mg dose in two phase 2 studies
- Preserved ALSFRS-R functional decline with long-term follow-up in RESCUE-ALS OLE:
  - 2.6 points slower decline at 48 weeks vs. placebo (p=0.159)
  - 6.0 points slower decline vs. to OLE original placebo (p=0.0057)
- 74% lower risk of time to clinical worsening at 6 months in the Healey ALS Platform Trial (p = 0.035)



## Global Phase 3 ALS Trial

- RESCUE-ALS and Healey ALS Platform Trial results support advancement to Phase 3 RESTORE-ALS with the 30 mg dose

# VISIONARY-MS STUDY Core Design Elements

Phase 2 Study: 48-Week Placebo-Control Treatment Period 2:1 Randomization (Active [15mg, 30 mg]: Placebo)



- Enrolled stable relapsing remitting MS participants with chronic optic neuropathy on background DMTs
- n=73 of 150 planned (~50%) study ended prematurely due to COVID-19 pandemic enrollment challenges
- Pre-specified statistical threshold set at p=0.10
- CNM-Au8 Open Label Extension (OLE) for original active and placebo continues for up-to-96 weeks

1°

Change in Low Contrast Letter Acuity (LCLA)



2°

Change in modified MS Functional Composite (mMSFC)



9HPT



SDMT



T25FWT



LCLA



# Baseline Demographics and Study Analysis

- All participants diagnosed with stable relapsing remitting MS with chronic optic neuropathy
- 92% treated with background DMTs (inc 53% monoclonal antibodies, 32% oral)
- Modified ITT (mITT) Analysis Population

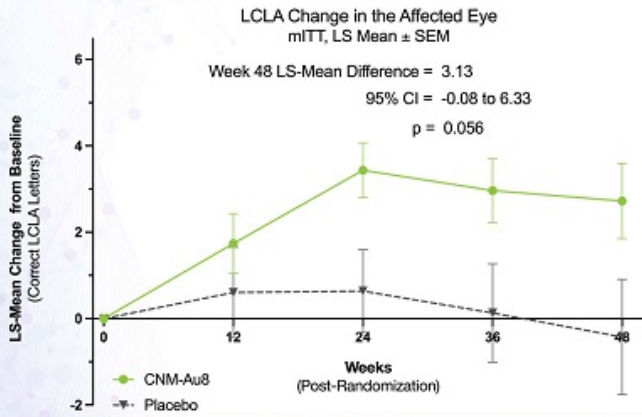
Baseline Value mean (sd)	Age (yrs)	Sex n, (%) Female	Race n, (%) White	Weight (kg)	EDSS Score	Years from Dx	Months Since Relapse
CNM-Au8 15 mg (n=24)	38.4 (10.2)	15 (63%)	23 (96%)	78.0 (17.1)	1.83 (1.3)	6.5 (5.0)	53 (57)
CNM-Au8 30 mg (n=25)	39.6 (7.6)	16 (64%)	24 (96%)	78.6 (17.3)	1.50 (1.1)	3.4 (3.3)	37 (35)
Placebo (n=24)	38.1 (8.3)	20 (83%)	22 (92%)	83.0 (23.3)	1.85 (1.4)	6.6 (3.7)	57 (38)
All Participants (n=73)	38.7 (8.6)	51 (70%)	69 (95%)	79.9 (19.3)	1.75 (1.5)	5.5 (4.3)	49 (45)

# CNM-Au8 Demonstrated Vision and Global Neurological Improvement in Stable MS patients on DMTs

## Significantly Improved Vision



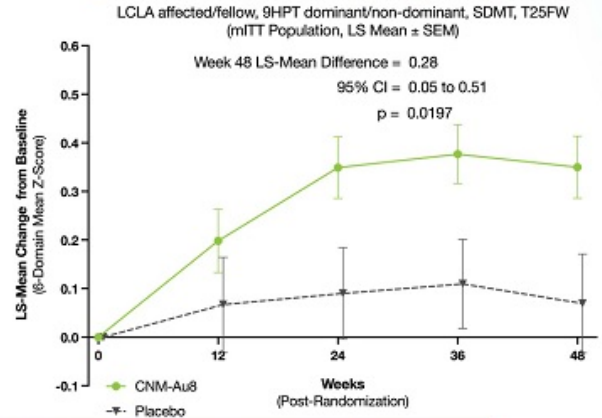
Change in Low Contrast Letter Acuity (LCLA)



## Global Neurological Improvement



Change in modified MS Functional Composite (mMSFC)



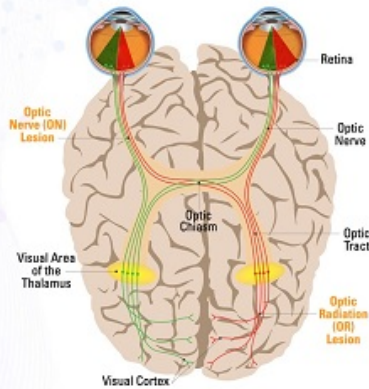
Global neurological clinical improvement was driven by cognition, manual dexterity, and low contrast letter acuity



# VISIONARY-MS Measures of Axonal Integrity

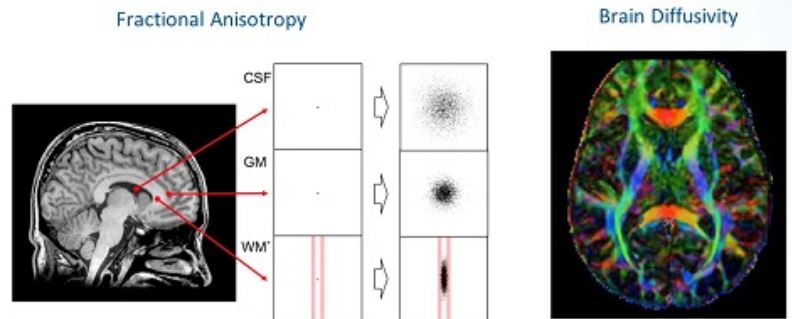
## Visual Evoked Potentials (VEP)

Multi-focal Amplitude and Latency Changes



## Advanced MRI Techniques

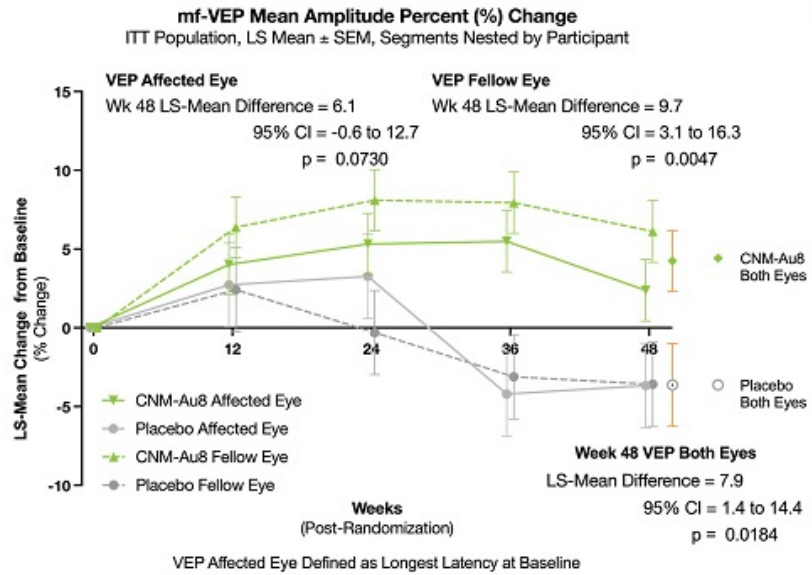
Diffusion Tensor Imaging (DTI) changes



What Happens in the Visual System Happens Throughout the MS Brain

# CNM-Au8 Improved Information Signal in the Visual Pathway

Increased Amplitude  
(Signal Strength)  
From the Eye to the Brain's  
Visual Cortex

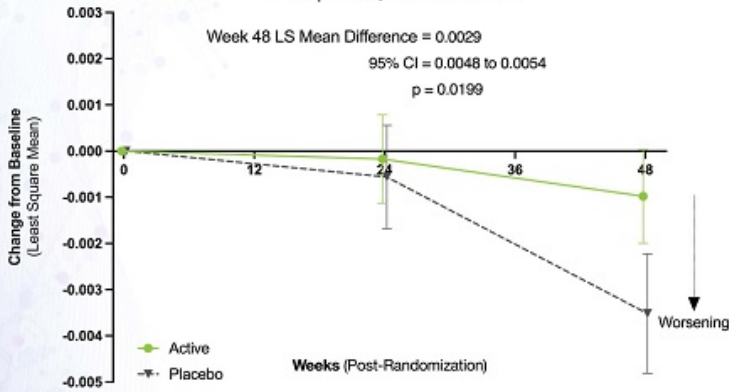


Increased VEP amplitude is associated with improved axonal integrity; provides evidence that previously impaired neurons can contribute to information signaling after treatment

# CNM-Au8 Preserved White Matter Integrity Throughout the Brain

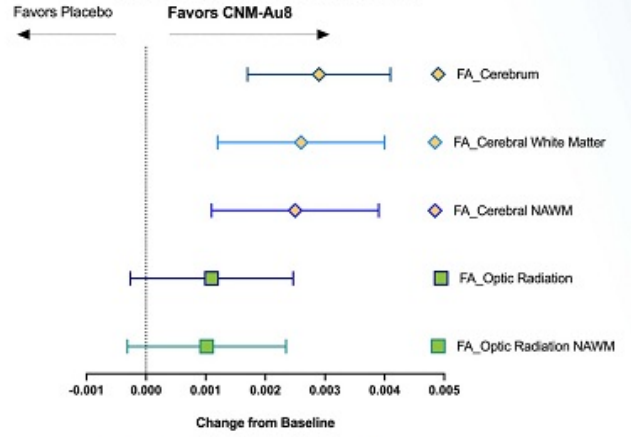
## Preserved Whole Brain White Matter Integrity

Diffuion Tensor Imaging | Fractional Anisotropy (FA) Change  
Whole Brain (Cerebrum)  
ITT Population, LS Mean  $\pm$  SEM



## Consistent Effect Across All Brain Regions

Diffusion Tensor Imaging | Fractional Anisotropy (FA)  
Week 48 Change from Baseline  
ITT Population, LS Mean Difference  $\pm$  SEM



Preservation of white matter integrity associated with decreased cognitive and functional decline in MS patients

# Building the Clinical Case for Neuroprotection & Remyelination



Established brain target engagement in early PD and stable relapsing MS patients

CNM-Au8 demonstrated statistically significant survival benefit of 60% decreased risk of death through 120 wks

CNM-Au8 demonstrated a >90% reduction in risk of death or permanently assisted ventilation for the 30 mg dose at 24 weeks

CNM-Au8 demonstrated global neurological improvement in stable relapsing MS as an **adjunct** to immunomodulatory DMTs



Growing Body of Clinical Evidence Across ALS and MS Supports CNM-Au8 Therapeutic Potential to Treat Neurodegenerative Diseases



Proprietary Nanotherapeutic Manufacturing  
Strong IP: 150+ granted patents PLUS Trade Secrets

## Summary | Consistent Paraclinical Evidence of Neuroprotective Effects Favoring CNM-Au8 Treatment

Paraclinical Endpoint	Paraclinical Measure LS Mean Change – Week 48	Significance	Key Findings	Implications
Diffusion Tensor Imaging (DTI) measure of Fractional Anisotropy (FA)	FA within the whole brain (Cerebrum)	$p = 0.0199$	Improvements of axonal integrity and neuronal structure across the brain	Neuroprotection and preservation of white matter integrity associated with decreased cognitive and functional decline
	FA within total Cerebral White Matter	$p = 0.0805$		
	FA within total Cerebral Normal Appearing White Matter	$p = 0.0823$		
Multi-focal Visual Evoked Potential (mf-VEP)	Amplitude percent change across both eyes	$p = 0.0184$	Improved information signal along the visual pathway	Neuronal preservation and improved information signal from previously impaired neurons
	Amplitude percent change in the most affected eye at baseline	$p = 0.0730$		
	Amplitude percent change in the least affected eye at baseline	$p = 0.0047$		

Critical unmet need in MS for treatments that protect neuronal function independently of immunomodulation to decrease disease progression



## CNM-Au8 treatment was safe and well-tolerated

- Treatment emergent adverse events (TEAEs) were transient and predominantly mild-to-moderate
- No dose limiting adverse events; no related serious adverse events

Treatment Emergent Adverse Events (TEAEs)	Placebo number (%)	CNM-Au8 15 mg number (%)	CNM-Au8 30 mg number (%)
Subjects with any TEAE	22 (92%)	21 (88%)	25 (100%)
Subjects with SAE	2 (8%)	1 (4%)	2 (8%)
<b>Subjects with Related TEAEs</b>	2 (8%)	2 (8%)	5 (20%)
<b>Subjects Discontinued due to TEAE</b>	1 (4%)	--	1 (4%)

**Placebo** SAEs: (1) Lentigo maligna melanoma, (2) pregnancy; **CNM-Au8 15mg** SAEs: (1) Pneumonia, bacteremia (staph aureus), endocarditis; **30mg** SAEs: (1) Ketamine infusion for pain and paracetamol overdose; (2) deep vein thrombosis (6-months post-discontinuation)

CNM-Au8

# CNM-Au8 is Consistently Favored for Treatment of MS Progression Independent of an Immunomodulatory Effect



## Significant Opportunity

- MS patients continue to progress with increasing cognitive and functional deficits accumulating even while receiving disease-modifying therapies—a significant unmet medical need



## CNM-Au8® Clinical Results

- Significant improvements in clinical outcomes, brain structure, and visual system on top of immunomodulatory standard of care therapy
- Paraclinical MRI and VEP improvements support clinical benefits, consistently favoring CNM-Au8



## Global Phase 3 MS Trial

- Phase 2 VISIONARY-MS safety and efficacy results support advancement to Phase 3



# Over 450 Years of Subject Exposure Without Identified Safety Signals Across ALS, MS, and PD

## Clean Toxicology Findings

All Animal Toxicology Studies Resulted in No-Adverse Effect Level (NOAEL) Findings

- Multiple species up to 9-months treatment
- Up to maximum feasible dosing without any toxicology findings related to CNM-Au8

## Well Tolerated Adverse Event (AE) Profile

Assessed as Predominantly Mild-to-Moderate Severity and Transient

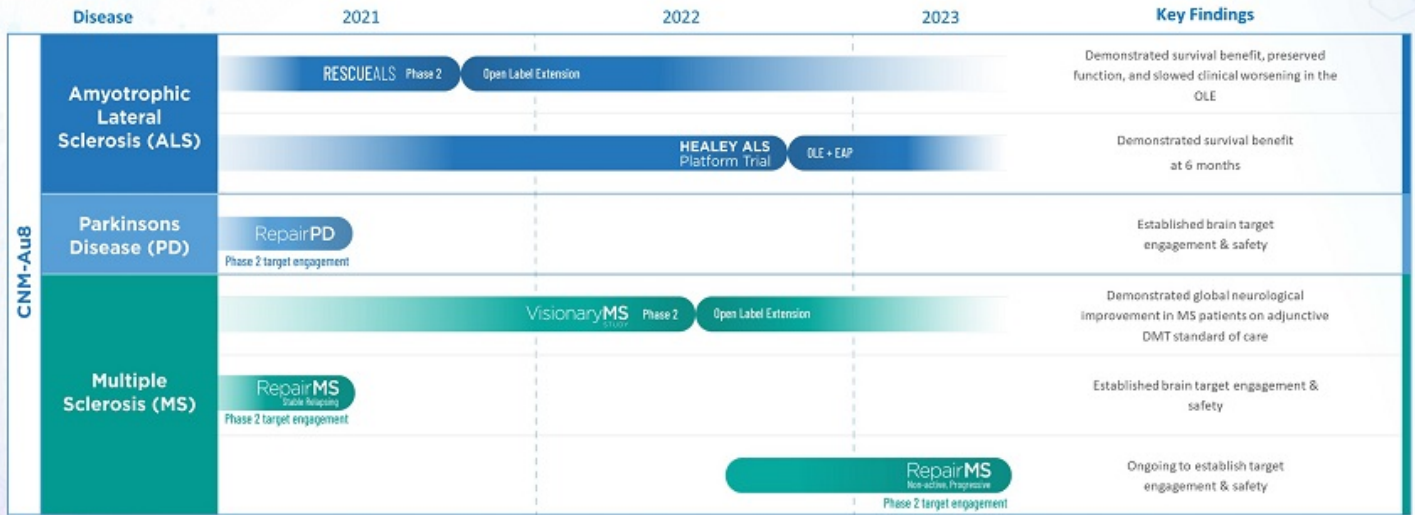
- No SAEs related to CNM-Au8 considered severe, life-threatening, or resulting in death
- AEs transient and predominantly mild-to-moderate severity

## Patient Exposure Across ALS, MS & PD

Over 450 Years of Subject Exposure Without Identified Safety Signals

- Long-term dosing experience up to 175 weeks

# Growing Body of Evidence for CNM-Au8<sup>®</sup>





# Evidence Supports CNM-Au8 Therapeutic Potential to Treat Neurodegenerative Diseases

## CNM-Au8<sup>®</sup>

a gold nanocrystal suspension, in development as the first cellular energetic catalyst to remyelinate<sup>1</sup> & protect neurological function



60% decreased risk of death in ALS through 120 weeks



>90% decreased risk of death with 30 mg in ALS



Demonstrated global neurological improvement in MS patients on adjunctive DMT standard of care



>450

patient years of CNM-Au8 clinical exposure

Strong IP:

150+

patents on nanotherapeutic platform



As of March 31, 2023, cash and equivalents on hand (unaudited):

\$18.4M



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NANOMEDICINE

Clene Inc.

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Salt Lake City, UT 84121

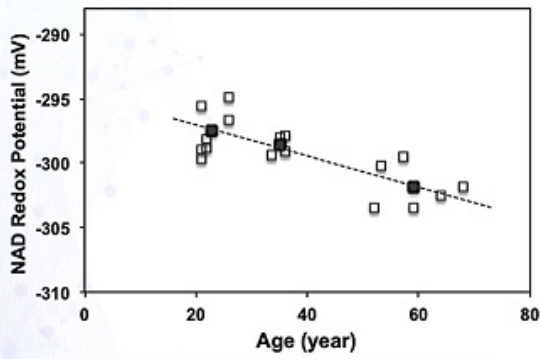
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North East, MD 21901

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Version: 15-June-2023



# Neurodegenerative Diseases Share A Common Mechanism: A Decline In The Brain's Ability To Produce Energy

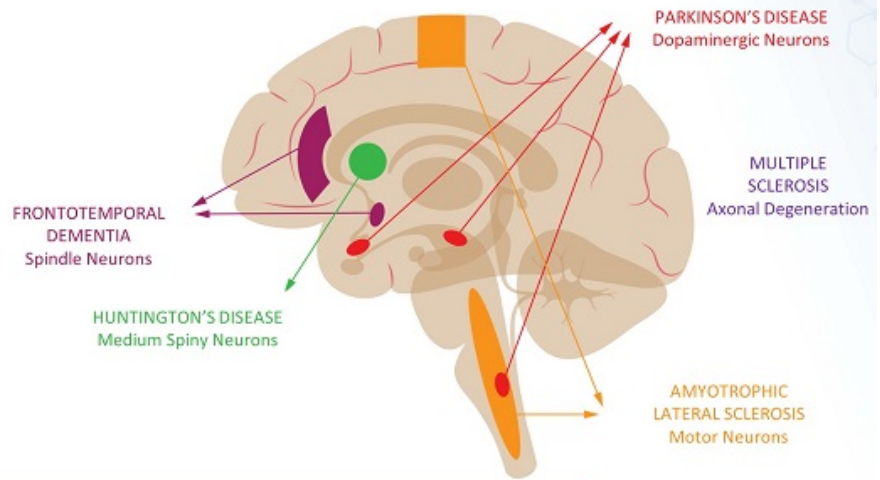
Brain Energy Potential  
Declines With Normal Aging



~0.5% NAD<sup>+</sup>/NADH unit decline per decade  
(~0.13 mV units per year by <sup>31</sup>P-MRS Imaging)

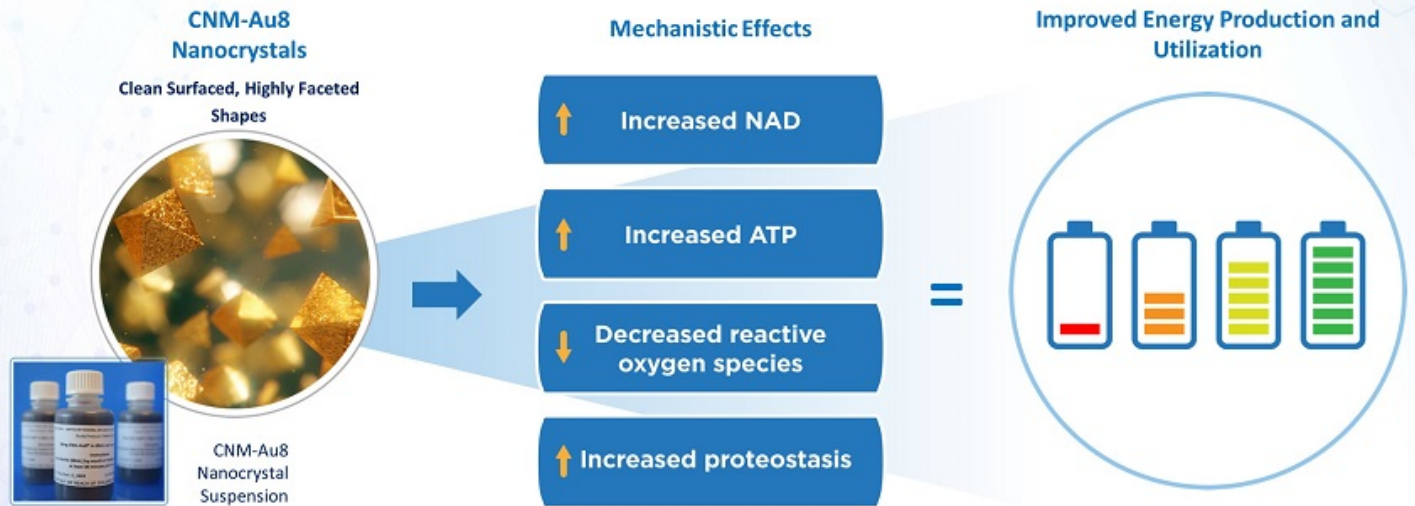
Closed squares = averaged data by age group: 21–26 yrs, 33–36 yrs, and 59–68 yrs old;  
Open squares = individual subject values

Specific Neuronal Populations Are Vulnerable to Energetic Failure



Energetic impairments in the CNS both pre-dispose and drive  
progression in neurodegenerative diseases

# CNM-Au8® | Pioneering A New Drug Class To Improve Cellular Energy Production And Utilization



By targeting energy metabolism, CNM-Au8 may protect neuronal health



# Significant Global Opportunity for Treatment in Combination with Standard of Care

## Motor Neuron Disease (ALS, Other Orphan Disorders)

ALS PATIENTS IN US & EU **~40K**  **\$1B** GLOBAL SALES BY 2029<sup>1</sup>



Current drugs are largely ineffective, mostly generic.

**2-5 YEARS**<sup>2</sup> LIFE EXPECTANCY  **100% FATAL**

## Multiple Sclerosis (MS)

MS PATIENTS GLOBALLY **2.2M**  **\$23B** MARKET<sup>3</sup>



Existing treatments only target immunomodulation

EMERGING EVIDENCE THAT EARLY MS IS NEURODEGENERATIVE 

## Parkinson's Disease (PD)

**2ND** MOST COMMON DISORDER  **\$6B** PROJECTED BY 2026<sup>4</sup>



No disease-modifying treatments available, only symptom-targeted options

**30%** OF DOPAMINERGIC NEURONS ARE LOST AT DIAGNOSIS<sup>5</sup> 

Urgent unmet need to develop neuroprotective treatment to support cells' energetic efficiency and resilience

# Two REPAIR Trials Demonstrated Target Brain Engagement and Improved Energy Metabolism in Early Parkinson's and Stable Relapsing MS

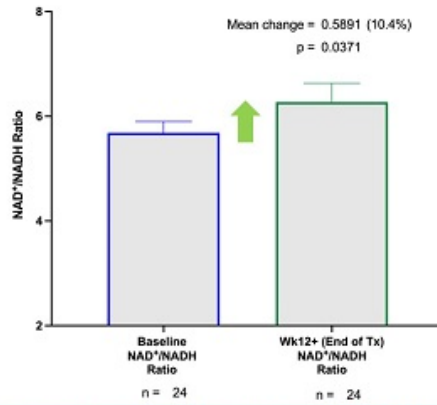
**Study Objective:** to demonstrate target engagement for CNM-Au8 on CNS biomarkers related to energetic effects in the brain using Magnetic Resonance Spectroscopy ( $^{31}\text{P}$ -MRS)

Results demonstrated a potentially meaningful 10% improvement in  $\text{NAD}^+/\text{NADH}$  ratio, an essential molecule for energy production<sup>1</sup>

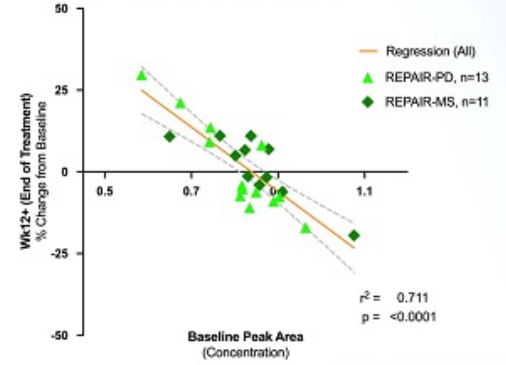
1° Endpoint (Integrated PD & MS)<sup>2</sup>

Exploratory  
(ATP Normalization)

**$^{31}\text{P}$ -MRS Change in Brain  $\text{NAD}^+/\text{NADH}$  Ratio at End of Treatment**  
Partial Volume Coil; Ratio of  $\text{NAD}^+/\text{NADH}$  (% Fraction of  $\text{NAD}^+$  / % Fraction  $\text{NADH}$ )  
Primary Endpoint, Mean  $\pm$  SEM (Paired t-test)



**REPAIR Integrated Analysis**  
 **$^{31}\text{P}$ -MRS Change in  $\beta$ -ATP at End of Treatment**  
Full Volume Coil  $^{31}\text{P}$  Signal Area (Integral)  
Exploratory Endpoint, Percent (%) Change vs. Baseline Value



RepairPD  
Early Parkinson's Disease

RepairMS  
Stable Relapsing MS

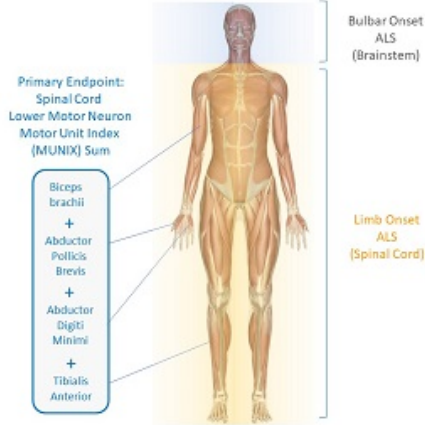
RepairMS  
Non-Active Progressive MS  
(Ongoing)

**Study Objective:**

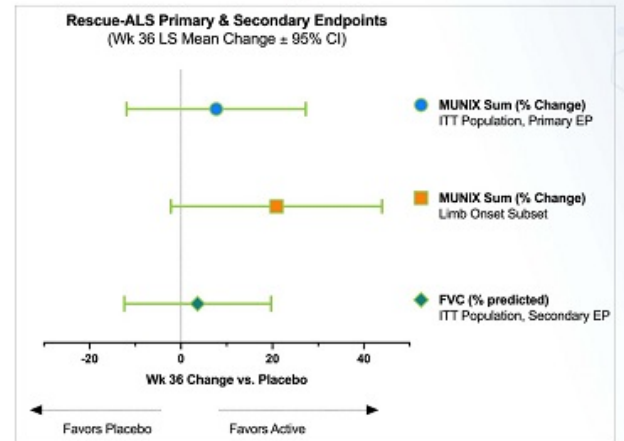
Detect preservation of motor neuron function in people with early ALS as measured by MUNIX

**Study Design:**

36-week blinded treatment with ongoing long-term open-label follow-up



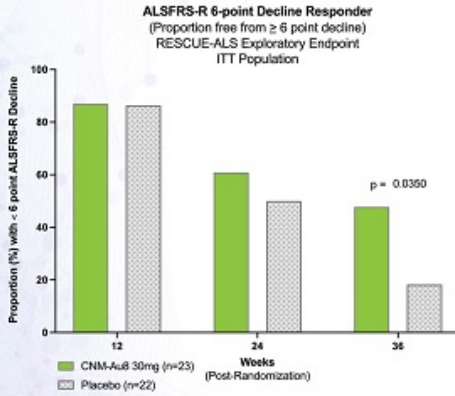
**1° & 2° Endpoints**



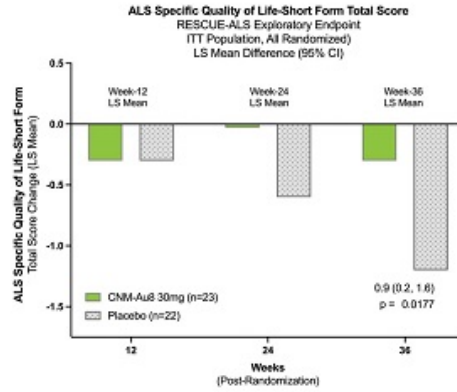
**Results favor CNM-Au8 treatment**

Phase 2 Study: 36-Week Placebo-Control Treatment Period 1:1 Randomization (Active 30 mg: Placebo); N=45 enrolled with early ALS

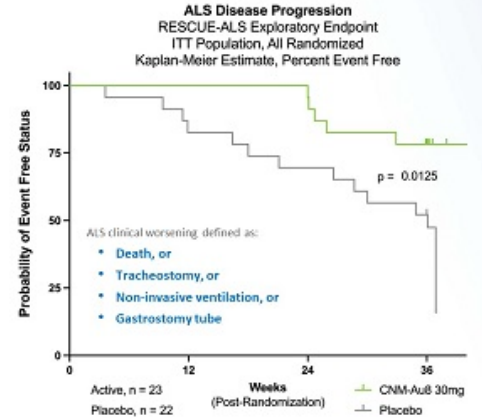
## Proportion with <6 point decline



## ALS Specific QOL



## ALS Clinical Worsening



**CLENE'S CNM-Au8® SHOWS STATISTICALLY SIGNIFICANT  
DIFFERENCE IN PLASMA NEUROFILAMENT LIGHT (NfL) LEVELS  
IN THE HEALEY ALS PLATFORM TRIAL**

- CNM-Au8® treatment demonstrated significantly reduced plasma neurofilament light chain (NfL) levels compared to placebo at 24 weeks (p=0.04)
- Clene plans to discuss the totality of the survival and time-to-event results from the full CNM-Au8 clinical data set, including the plasma NfL biomarker data, at an upcoming FDA meeting to accelerate the path toward approval

SALT LAKE CITY, June 15, 2023 (GLOBE NEWSWIRE) – Clene Inc. (NASDAQ: CLNN) (along with its subsidiaries, “Clene”) and its wholly owned subsidiary, Clene Nanomedicine, Inc., a clinical-stage biopharmaceutical company focused on revolutionizing the treatment of neurodegenerative diseases, today reported new data demonstrating a statistically significant reduction of plasma neurofilament light chain (NfL) levels for CNM-Au8® treated participants compared to placebo after 24 weeks of treatment in the double-blind, placebo-controlled period of the HEALEY ALS Platform Trial.

NfL is a key biomarker of neurodegeneration. NfL is released from neurons following axonal injury, especially in people living with ALS, where higher levels of NfL have been found to predict more rapid decline in clinical function and increased mortality risk. Surrogate biomarkers such as NfL have recently been used to support an FDA approval for the treatment of ALS.

**Six-Month Plasma NfL Biomarker Findings from the Regimen C (CNM-Au8) Arm in the HEALEY ALS Platform Trial**

The results are based on an analysis of the plasma NfL biomarker across all Regimen C participants (CNM-Au8 or placebo, n=161), representing a broad ALS population, as the least-square mean (LS mean) change of the natural logarithm (Ln) of the plasma NfL values with the standard error (SE):

- CNM-Au8 treatment reduced plasma NfL levels compared to placebo; LS Means on a Ln Scale for the 24-week difference of plasma NfL: CNM-Au8 = -0.024 (SE: 0.024); placebo = +0.076 (SE: 0.042); CNM-Au8 vs. placebo difference of LS Means on a Ln Scale = -0.100 (SE: 0.048), p=0.040.

**ALS Participants at the Greatest Risk of Disease Progression Showed Consistent Benefit**

In addition to the full analysis across all Regimen C participants, sensitivity analyses showed consistent significant reduction in plasma NfL levels versus placebo observed in specific populations generally considered at greater risk of ALS disease progression, including:

- **Faster progressors** (baseline pre-treatment ALSFRS-R slope >0.45 points/month (*post hoc*, n=107); Difference of LS Means on a Ln Scale (SE) = -0.144 (0.058); p=0.014.
- **Definite or probable ALS diagnosis** per El Escorial criteria (*post hoc*, n=125); Difference of LS Means on a Ln Scale (SE) = -0.124 (0.054); p=0.023.
- **Higher mortality risk** (baseline plasma NfL > median, *post hoc*, n=79); Difference of LS Means on a Ln Scale (SE) = -0.150 (0.068); p=0.031.

Analyses of NfL from serum samples specified as the primary blood matrix for analysis are underway. Additional biomarker and long-term survival data from the HEALEY ALS Platform Trial double-blind and open-label extension periods have been collected and are undergoing testing preparatory for analysis to be reported later this year.

“The totality of survival and time-to event data supports my belief that CNM-Au8 should move forward expeditiously into the next phase of clinical development,” said Merit Cudkowicz, M.D., Chair Neurology Department, Director, Sean M Healey & AMG Center for ALS, and the Principal Investigator of the HEALEY ALS Platform Trial. “These clinical and biomarker evidence from the Phase 2 HEALEY ALS Platform Trial will also help advance the design of a Phase 3 trial to increase our confidence in how CNM-Au8 can delay the clinical course of this devastating neurodegenerative disease.”

Benjamin Greenberg, M.D., Head of Medical at Clene, commented, “The statistically significant difference in plasma neurofilament levels, a key marker of neurodegeneration, is another independent indicator of slowed disease progression associated with CNM-Au8 treatment. Results with CNM-Au8 treatment in multiple Phase 2 trials in ALS previously showed two independent indicators of slowed disease progression—CNM-Au8 decreased time to clinical worsening and improved survival at the 30 mg dose. These independent pieces of evidence strongly support CNM-Au8 as a potential treatment for ALS.”

Rob Etherington, Clene’s CEO, added, “For the first time, the FDA has recently granted accelerated approval of another ALS therapy based upon plasma NfL as a biomarker predictive of clinical efficacy. Clene is exploring the possibility for a NDA filing. In addition to planning the global Phase 3 ALS trial, we are preparing the complete CNM-Au8 clinical data package including our strong safety evidence, biomarker, survival, and time-to-event analyses for FDA regulatory discussion in the third quarter. We believe the benefit-risk framework for CNM-Au8 strongly favors a path to approval.”



## **About Clene**

Clene is a clinical-stage biopharmaceutical company focused on revolutionizing the treatment of neurodegenerative disease by targeting energetic failure, an underlying cause of many neurological diseases. The company is based in Salt Lake City, Utah, with R&D and manufacturing operations in Maryland. For more information, please visit or follow us on [Twitter](#), [LinkedIn](#), and [Facebook](#).

## **About CNM-Au8®**

CNM-Au8 is an oral suspension of gold nanocrystals developed to restore neuronal health and function by increasing energy production and utilization. The catalytically active nanocrystals of CNM-Au8 drive critical cellular energy producing reactions that enable neuroprotection and remyelination by increasing neuronal and glial resilience to disease-relevant stressors. CNM-Au8® is a federally registered trademark of Clene Nanomedicine, Inc.

## **About Healey ALS Platform Trial**

The HEALEY ALS Platform Trial is a perpetual multi-center, randomized, double-blind, placebo-controlled Phase 2 program designed to evaluate the efficacy and safety of multiple investigational products in people living with ALS. This landmark platform trial tests multiple treatments utilizing a shared placebo group. 161 participants were randomized to 30 mg CNM-Au8, 60 mg CNM-Au8, or placebo as adjunct to standard of care for a 24-week treatment period. Active drug was offered to all participants who were eligible and elected to continue into the Open Label Extension. The primary outcome of the trial was the change in disease severity over time as measured by ALSFRS-R through 24 weeks accounting for mortality (analyzed using a Bayesian shared parameter model). Prespecified secondary efficacy endpoints included the Combined Assessment of Function and Survival joint rank test (CAFS), change in respiratory function as measured by slow vital capacity (SVC), and overall survival. For more information, please see [ClinicalTrials.gov](#) Identifier: [NCT04297683](#).

## **Forward-Looking Statements**

This press release contains “forward-looking statements” within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended, which are intended to be covered by the “safe harbor” provisions created by those laws. Clene’s forward-looking statements include, but are not limited to, statements regarding our or our management team’s expectations, hopes, beliefs, intentions or strategies regarding our future operations. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. The words “anticipate,” “believe,” “contemplate,” “continue,” “estimate,” “expect,” “intends,” “may,” “might,” “plan,” “possible,” “potential,” “predict,” “project,” “should,” “will,” “would,” and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. These forward-looking statements represent our views as of the date of this press release and involve a number of judgments, risks and uncertainties. We anticipate that subsequent events and developments will cause our views to change. We undertake no obligation to update forward-looking statements to reflect events or circumstances after the date they were made, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws. Accordingly, forward-looking statements should not be relied upon as representing our views as of any subsequent date. As a result of a number of known and unknown risks and uncertainties, our actual results or performance may be materially different from those expressed or implied by these forward-looking statements. Some factors that could cause actual results to differ include our ability to demonstrate the efficacy and safety of our drug candidates; the clinical results for our drug candidates, which may not support further development or marketing approval; actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials and marketing approval; our ability to achieve commercial success for our drug candidates, if approved; our limited operating history and our ability to obtain additional funding for operations and to complete the development and commercialization of our drug candidates; and other risks and uncertainties set forth in “Risk Factors” in our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q. In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this press release, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and you are cautioned not to rely unduly upon these statements. All information in this press release is as of the date of this press release. The information contained in any website referenced herein is not, and shall not be deemed to be, part of or incorporated into this press release.

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